

JPRS-UEA-89-035  
31 OCTOBER 1989



**FOREIGN  
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# ***JPRS Report***

# **Soviet Union**

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***Economic Affairs***

# Soviet Union

## Economic Affairs

JPRS-UEA-89-035

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31 OCTOBER 1989

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## ECONOMIC POLICY, ORGANIZATION, MANAGEMENT

### Ruble Convertibility Considered Essence of Present Reforms

18200461 Moscow IZVESTIYA in Russian 19 Sep 89  
Morning Edition p 5

[Article by B. Fedorov, candidate of economic sciences:  
"Can Convertibility Be Introduced by a Decree?"]

[Text] Ruble convertibility is now one of the most popular subjects. Most likely, there is no problem that causes more contradictory interpretations. The spectrum of opinions of specialists and scientists ranges from demands for an immediate introduction of convertibility (as an economic panacea) to an especially "realistic" position envisaging a preliminary advance of the economy, establishment of an export base, and a subsequent slow, stage-by-stage movement to convertibility in the indefinite future.

We shall try to glance at the problem without prejudice. Three key factors must be understood clearly. First, convertibility, essentially, is equivalent to hard, stable money, that is, it is incorrect to consider it a purely foreign economic matter. Convertibility should not be reduced to technical acts of exchange of one currency for another. Second, convertibility is a connection between the internal and the foreign market through a flexible currency rate of exchange and a lack of restrictions, at least, in trade in goods and services. A direct attachment of our rigidly centralized economy to the world market under present competitiveness can only aggravate the situation. In other words, the movement to convertibility is equivalent to the establishment of an internal market. Third, a rapid "opening" of the economy with the retention of distortions in prices and chronic shortages can nullify the pluses of convertibility and intensify inflation.

On the basis of the above-stated the elements of convertibility proper (rate of exchange, currency market, and freedom of export-import operations and of the use of national currency in them) even with their persistent introduction will not give an acceptable solution. It is another matter that a flexible market rate of exchange, a developed currency market, and liberalization of foreign economic activity will further the restructuring of the entire economic mechanism and the activation and development of market relations and, therefore, these elements can and should be introduced right now. Unfortunately, progress is minimal here: We have lost 3 years with so-called differentiated currency coefficients used in settlements of accounts with exporters. Nine months have flown by without results from the day of the decision on currency auctions, at which it is not planned to sell centralized currency resources and, as is expected, an access to the auctions themselves will be limited.

Foreign economic activity is altogether regulated unjustifiably. The government prerogative is granted to departments. However, enterprises do not have the right to choose a currency bank.

The approach to ruble convertibility should begin from the mechanism of money emission. This means that both a cash and a cashless emission should be controlled strictly. The financing of the budget deficit through emission should be prohibited legislatively and the existing state debt should be formulated into specific promissory notes with specific terms and interest rates. Since money circulation is unbalanced, the beginning of any transformations requires a surgical cut in the volume of the mass of money at the expense of the budget. There can be no convertibility in a situation, when the budget deficit is planned in the amount of 60 billion rubles.

The problem of convertibility largely represents the problem of economic efficiency. It is obvious that only a truly independent enterprise not bound by normatives of profit distribution and by state order plans received from above can be efficient. It is illegitimate to place state enterprises, joint enterprises, cooperatives, and "individuals" under excessively different conditions—this stifles competition and leads to negative phenomena, which can give a basis for incorrect conclusions. The idea of demonopolization has not yet found practical development.

In my opinion, it is necessary to diminish the role of the state in the economy and in production financing through the budget (important shifts are already planned here). Despite the concentration of boundless power in the center, a loss of control over the development of events is felt: Contradictions of a regional nature have intensified and voices about transforming the country into a raw-material appendage of Western monopolies are heard ever more loudly. Since the hypertrophied role of the state in production and finances has become a synonym of inefficiency and inflation, this role must be curtailed—it should be left for the government to engage in state functions proper. At the same time, we should not begin from prices, which it is more logical to "freeze," but from costs and rise in labor productivity, enabling enterprises to have any number of workers paid at an appropriate level. How is it possible to reform prices, or to talk about a new currency rate of exchange, if costs are repeatedly distorted and inflated staffs exist next to undeveloped modern sectors? The wage increase is largely a reaction to inflation, which the state itself stimulates.

Convertibility cannot be introduced by a legislative act. It requires a large number of interconnected measures. For example, the opinion that the establishment of a currency market should be in the center and auctions will be the first step toward this is unsound. For now enterprises have available only on the order of 5 percent of the country's total currency proceeds, so that there can be no talk of a currency market. A decrease in the role of the state is also necessary in this area, for which precisely

auctions, a market, and developed currency credit, instead of the country's obsolete traditional currency plan, would come in handy. However, there is not only a need for freedom to use foreign currency, but also for gradually granting foreign legal and physical entities rights to operations with rubles, which is prohibited today. We will not come closer to convertibility if the ruble performs monetary functions only in the internal turnover and in a limited way at that.

Another aspect of the question lies in the fact that we continue in the name of good (and not very good) goals to thoughtlessly destabilize internal money circulation by introducing foreign currency and its surrogates into it. Appeals of the type of "the country needs currency" are traditional, but this very currency is used in an extremely inefficient manner, basically as budget allocations. It is understandable that the rise in the role of foreign currency, chronic shortages of an ever bigger number of goods, inflation, and an endless emission transform the ruble into a "dropping" currency. Against this background the slogan of currency self-repayment has been proclaimed at all levels—enterprise, sector, and republic. Obviously, such policy leads to an even bigger fragmentation of the economy and to the weakening of economic relations.

Linking the economy of the entire country into a single whole on the path to convertibility implies, first of all, the establishment of an integrated financial market, which includes various types of credit (bank, interbank, and commercial) and the issue of shares and bonds. The more credit is developed, the less ready cash is needed in principle. At the same time, the regulation of credit and of money circulation should be in the hands of the central bank (our State Bank). To this day there is virtually no movement in this direction if we disregard the unprofessional experiment with the shares of an enterprise and a labor collective. Moreover, it is doubtful whether another country, where problems of currency reserves and foreign borrowing are artificially separated from money and credit policy, will be found. As a consequence, we do not have a unified money-credit and currency policy and a sound and independent central bank.

The convertibility problem is mostly connected with the determination of the ruble's rate of exchange. An impression is created that there is an intention to "calculate" the new rate of exchange on the basis of new prices and to introduce it as of 1991. No matter what prices the State Committee on Prices may set in the very near future, they will be only one of the guidelines of the policy concerning the currency rate of exchange. Under conditions of the unbalanced economy today there can be talk only of the initial rate of exchange, which then will be changed flexibly and will make it possible to help to settle the problem of the balance of payments. Only a consistent development of the commodity, financial, and currency market and the elimination of currency restrictions will lead us to the ruble's more or less real rate of exchange. At the same time, there are no doubts

that the new rate of exchange should be much lower than the present official one, although not equal to the "black" one (apparently, 3 or 4 rubles per dollar).

The period of transition to a market economy requires immediate solutions, primarily, however paradoxical it may seem, of an administrative nature. The convertibility of the Soviet ruble is not a panacea, not an abstract goal, but the means and essence of implemented reforms. The program for the introduction of convertibility is equivalent to the program for restructuring the entire economy on market principles. Complex problems do not have easy solutions. It should also be taken into consideration that our lag behind the world economy continues to increase and a further delay with urgent measures signifies the emergence of additional problems and costs.

### No Management Advantage Seen in New Concerns

904A0010a Moscow *EKONOMICHESKAYA GAZETA*  
in Russian No 39, Sep 89 pp 12-13

[Article by D. Levchuk, candidate of economic sciences: "Concerns Just Like Ministries?"]

[Text] The USSR Supreme Soviet has approved a new government. With regard to its composition, it is the most numerous in 20 years. The number of ministries has been cut back to 19, and as recently as 1984 there were 38 of them. Nevertheless...

In many cases, the restructuring which was conducted in the higher echelons took place in a pro forma manner, created many additional difficulties of an organizational and psychological nature, led to a change of signs, a game of "musical chairs," a lowering of responsibility and organizational qualities in the work of the administrative organs.

The following figures attest to the fact that the reductions on the administrative apparatus which were carried out were, to a large extent, formal in nature: from 1985 through 1988 the number of employees in the apparatus of the administrative organs as a whole was cut by approximately 600,000 persons. Of these, more than 500,000 administrative positions were reduced by means of eliminating various intermediate levels.

During this same period the numerical strength of the administrative apparatus at enterprises and in other low-level organizations increased by approximately 700,000 persons. In connection with this, the proportion of administrative personnel within the total number of employees at industrial enterprises also grew. Thus, there was a genuine reduction merely of the central apparatus of the ministries and departments—it was cut back by more than one-third, but the elimination of the middle levels of administration led, to a considerable extent, merely to an overflow of administrative personnel from the main administrations into the apparatus of the newly created associations.

Many large associations constitute multi-tier, administrative structures which, with regard to the composition of the enterprises included within them, perform those same planning and distributive functions that are carried out by main administrations.

The Zaporozhtransformator NPO [scientific production association] or the Drevmash NPO constitute typical examples of such "restructuring." They still include on their staffs a large portion of the production associations and enterprises of the former main administrations for transformers or the Main Administration for the Wooden Tank Industry. The territorial associations in construction are the same old main administrations under different names.

The following question arises: why are the structural changes occurring in such a fashion? Why have the main planning, distributive, and operative functions of the ministries been retained de facto unchanged? Why have the intermediate levels survived under new signs, despite the consistent and fierce struggle—begun as early as 1985—to cut back on the apparatus and the structural levels?

How can we extricate ourselves as rapidly as possible from the all-encompassing dictates of the administrative-command methods—the sole desire of all who understand that, while using such methods, it is impossible to bring the economy out of the dead end of wasteful management. However, there is also a specific reality, which is characterized by an increasing imbalance in public production, the commodity market, and financial circulation, as well as by an exacerbation of social tension. And it must be said straight out that deepening the crisis tendencies was speeded up by the frequently hasty dismantling of the administrative system's elements without creating economic mechanisms capable of compensating for the weakened economic administration. In many cases restructuring the apparatus outstripped the changes in planning and the other elements of management.

One of the principal economic regulators replacing the administrative style of management must become a developed market, including markets for commodities, capital, labor, securities, and skills. The creation of a market requires the formation of the appropriate organizational structures, mechanisms, and legal institutions. In my opinion, this will realistically require at least 5-7 years.

But, for the time being, administrative-type management and controls (a directive-type planning, fund distribution of products, etc.) continues to be a necessary means of state regulation, particularly in the basic sectors of industry and in transport, while the existing sectorial ministries regulate its operational organs. The given circumstances must not be underestimated.

From this point of view it is likewise interesting to look at the conflict which has been entered upon by the newly

formed concerns—inter-sectorial state associations (MPO's)—and the existing administrative system.

Let's recall that the first three MGO's [inter-sectorial state associations]—Energomash, Tekhnokhim, and Kvantemp—were created as independent formations of enterprises which had come out from under ministerial jurisdiction. Management of a concern is based on democratic principles—within the MGO Council of Directors everyone is equal; the council's decisions are implemented by a modest-sized executive apparatus or by the directors of the MGO.

Thus, the founders of these concerns hoped that, having "freed" their own enterprises from the entanglements of subordination to the ministries, they would be able to operate basically on economic principles. Many specialists and scholars consider, for example, that the creation of 200-300 inter-sectorial state associations would allow us to generally abandon the ministries' services or to reduce their operative functions to a minimum, i.e., to convert essentially to the economic management methods.

But let's examine whether or not an MGO is a genuine alternative to a ministry.

As B. Fomin, the general director of Elektrosila, asserts: "MGO's save the ministries from having to exercise the functions of operative management." To the extent that the ministry concerned no longer has to answer for the activity of enterprises which have come out from under their jurisdiction—this is true. However, the MGO enterprises have not found genuine independence, inasmuch as, just as before, they have tasks assigned to them, and resources are allotted to them in accordance with certain limits.

The MGO's have come to include many of this country's most important enterprises, the sole producers of custom-made products—electric-power plants, the sources of current; they also include some of the leading scientific research institutes, the design bureaus of sectors, etc. Therefore, it is impossible today to organize the work of these enterprises without state assignments and limits on resources. Consequently, the MGO's have had to create their own organization channels, linking them with the planning and other central organs: administrative ties disrupted in one place have had to be replaced by others. The MGO apparatus receives derived planning data from USSR Gosplan and brings it further to each enterprise individually as well as to the ministry. And so the first step toward allotting ministerial functions to an MGO was made right away during their creation.

And so, with regard to providing material-technical resources, the dispute about who will be engaged in this—the enterprises themselves via the territorial organs of USSR Gosstab, by-passing the MGO apparatus, or it itself—has not yet been resolved. Viewpoints have been exchanged—the Leningrad concerns insist on

reducing their own administrative functions to a minimum, while Gossnab is opposed to this. If we were to take the viewpoint of the MGO's, the channels of handing out assignments and providing resources would be bifurcated. Then various lacks of coordination and additional complexities would be possible when formulating balanced plans. Therefore, the Moscow Kvantemp MGO has already created a special apparatus—a cost-accounting firm, which has taken upon itself all functions with regard to supplying its own enterprises. Thus, its functions with regard to administrative management as a whole are analogous to those of a ministry.

Concerns will be able to become an economic alternative to the present-day administrative organs of management—the ministries—only when state orders pertain to several enterprises and are given out not on a mandatory basis but rather on a contractual basis, and when the enterprises are able to obtain the resources necessary to fulfill such state orders primarily in the market freely without any kind of centralized distribution.

Thus, the principal condition for the existence of a genuinely independent MGO or other major structures is a developed wholesale trade. But while none yet exists, even several tens of independent concerns, along with the ministries under the umbrellas of USSR Gosplan and Gossnab, and the permanent organs of the USSR Council of Ministers will create their own additional planning-and-distribution administrative structure. That is, we will receive, and in a multiplied form, everything that we want to get away from by cutting back on the ministries. Moreover, in retaining for a certain period a centralized system for distributing resources due to the lack of a market (and this will, evidently, be for more than one year), such an "alternative" to the ministries could create many organizational problems. To plan and manage 200 or 300 MGO's from a single center (if such a thing is possible at all) is much more complicated than to do so for 20 ministries. In that case, the laws of technology would be harmonious with those of administrative management, and we need to understand one thing clearly: no matter what structures based on the principles of democracy we may create during this period, they will turn out to be tied to the center by the same old administrative "umbilical chord." Moreover, the entire mass of operative questions will be inevitably interwoven at the very highest level of management, and all current questions, which at present are being solved by the ministries and central economic organs, will have to be solved for the government and its permanent organs. This circumstance cannot be ignored.

Thus, today, when the curtailment of a number of ministries is proceeding apace, and efforts are being undertaken, based on the enterprises of these departments, to form independent concerns, unfortunately, this does not essentially change anything; what is taking place is merely a change of signs. The concerns have taken the ministerial functions on themselves.

What, for example, is the fundamental difference between the ministerial functions of the recently founded Gazprom Concern (to replace the Ministry of the Gas Industry) or the Agrokhim State Association (to replace the Ministry of Mineral Fertilizer Production)? Based on their similarity, such formations are also being planned in other sectors and sub-sectors. They all differ from ministries merely by virtue of the fact that they have increased their own independence from the state organs, while retaining the previous channels for obtaining centralized resources.

The monopoly of the departments is being replaced by a monopoly of concerns, which will be significantly more complicated for the state to monitor. We must take into consideration the fact that even by creating 3-4 concerns in one sector, a monopoly will not be limited or restricted, since many of the most important types of products are produced predominantly at one enterprise. In that case, years will be required to form a progressive structure of industry, to create a genuine competition between the principal items of production—both Soviet and foreign. That is why large-scale production, even in the presence of strong, anti-monopoly legislation, will require during the transition period of reform a skilled administrative regulation on the part of the state. When we take this into account, we can scarcely fall into a state of euphoria, when we compare the new formations to the ministries. On the contrary, they must be monitored for the sectorial organs during the transition period.

...The danger of losing stabilizing supports in the system of radical reform is very great. The hasty reduction of administrative organs and apparatus, if the need for their functions remains, can lead not only to savings in administrative expenditures, but also to a weakening of management with all the negative consequences.

Therefore, a reasonable, judicious "conservatism" in carrying out the radical transformations of the economic mechanism should be one of the fundamental principles of the reform. And here, as well as in medicine, we must adhere to the strict rule of "Do no harm!" That is so because extreme freedom at times threatens to turn into economic chaos.

#### **Council of Ministers Decree on Taxation of Wage Funds**

904A0011a Moscow *EKONOMICHESKAYA GAZETA*  
in Russian No 39, Sep 89 p 23

[Decree of the USSR Council of Ministers on the Procedure and Privileges with Regard to the Tax Regulation of Wage Funds of State Enterprises (Associations), issued 21 September 1989]

[Text] In accordance with the Decree of the USSR Supreme Soviet, issued on 3 August 1989, entitled "On Taxation of the Wage Funds of State Enterprises (Associations)," the USSR Council of Ministers resolves:

1. To establish that the funds being channeled into wages by state enterprises (associations) and organizations on which the force of the USSR Law on State Enterprises (Associations) shall be subject to tax regulation, regardless of the forms of cost accounting being used.

2. All payments from the wage fund and the material-incentives fund (wage fund), to be determined in accordance with the established norms, shall be included in the increase of funds being channeled into the wage fund and subject to taxation.

An increase in funds channeled into wages connected with increasing the production of consumer goods and the amounts of services to the population shall not be subject to taxation.

3. The following types of expenditures by enterprises (associations) and organizations shall be exempted from taxation:

- an increase of payments in connection with carrying out during the years 1989-1990, upon the decisions of the USSR government, appropriate measures within the limits of the total sums being allocated to implement them;
- an increase in the funds for wages in connection with the increase in the production volumes and sales of agricultural and livestock-raising products;
- an increase in the funds for wages brought about by the growth of amounts of projects involving the construction and repair of apartment houses and facilities of a social-cultural nature;
- funds for the wages of invalids and persons with a limited capacity for work;
- payments from the wage fund to render aid to families of persons who died on the job, monetary compensations above the established pensions and payments to persons who have been mutilated or suffered from an occupational disease on the job.

4. Expenditures for wages on newly introduced enterprises, facilities, and organizations being carried out within the limits of the funds allocated for these purposes by ministries, departments, and other higher-ranking organs shall not be subject to taxation.

5. To establish that the increase of funds being channeled into wages during the fourth quarter of 1989 shall be determined in comparison with the de facto level of the fourth quarter of 1988. Beginning in 1990, the increase of such funds shall be computed quarterly (by an accumulating total since the beginning of the year), as compared with the corresponding period of the previous year.

In determining the base level of wages for a quarter, the de facto expenditures for the corresponding period of the

previous year shall be reduced by the sum total of ad hoc payments designed to provide incentives for work by staff members.

USSR Gosplan and the USSR State Committee for Labor and Social Problems shall establish a list of ad hoc payments.

To establish that enterprises (associations) and organizations shall fulfill their obligations to the banking institutions with regard to reimbursing the funds received by them for January-September 1989 for wages above those accounted for by the norms and conditions in effect for the formation and utilization of the wage fund, the material-incentives fund (wage fund) within the time periods established by the indicated obligations.

6. The deduction and payment of the regulating tax on the increase in the funds to be channeled into wages shall be imposed directly on the enterprises (associations) and organizations which bear responsibility for its timely and complete listing in the budget.

Monitoring the correctness of the tax payments shall be the task of the financial organs and the banking institutions at the place where the enterprises (associations) and organizations are located. In the event that the tax is concealed (reduced), the entire sum of the concealed (reduced) tax, as well as the fine in the amount of this sum, shall be recovered from the enterprises (associations) and organizations. The imposition of such payments and fines shall be handled in a non-dispute-type procedure at the expense of the wage fund (material-incentive fund).

7. The USSR Ministry of Finance and USSR Gosbank shall prepare and approve in the established procedure the appropriate normative documents, stemming from the present decree.

8. The USSR Ministry of Finance and the USSR State Committee for Statistics shall introduce the necessary changes in the data of the bookkeeping accounts and the statistical reports of the enterprises (associations) and organizations.

**L. Voronin, deputy chairman, USSR Council of Ministers**

**M. Shkabardnya, administrator of affairs, USSR Council of Ministers**

### **Industrial Leasing Takes Hold in Moscow Oblast**

18200431 Novosibirsk *EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA* in Russian No 6, Jun 89 pp 3-34

[Article: "Leasing At Moscow Plants"]

[Text] From agriculture, leasing arrangements have progressed into industry. The Butovo Construction Materials Combine has become a pioneer in this regard. Its undertaking, with the active support of the Moscow Oblast Party Committee, is being disseminated

throughout the oblast. Today the list of plants which have converted over to lease type arrangements for labor collectives in the Moscow area occupies more than one page.

There can be no doubt but that leasing represents only the beginning of the formation of new property relationships in Soviet industry. Thus importance is attached to studying even the partial acceptances by the first industrial lease holders—those who blazed the path for many followers.

### Combine Director Assesses First Year.

18200431 Novosibirsk *EKONOMIKA I ORGANIZATSIYA PROMYSHLENNOGO PROIZVODSTVA* in Russian No 6, Jun '89 pp 3-14

[Article by M.A. Bocharov: "The Purpose and Means for Development Are Available"]

[Text] Today many ministries and departments are reporting that 70-80 percent of the branch's or region's enterprises have converted over to the first and second cost accounting models. One can prove the advantages of the second model to the extent that he wishes, but I am convinced that true cost accounting still does not exist there, just as there are still not true improvements in the economy.

In my opinion, there is no point to waiting for someone to improve the Law Governing a State Enterprise. An opportunity must be sought for developing it and for introducing new initiatives. Leasing has become one of these. Here we see a path leading to a normal economic mechanism in which a collective truly, and not just in words, becomes the master of specific production. It was in December 1987 that we turned to our main administration—Glavmosoblistroyaterialy [Main Administration of the Building Materials and Structural Parts Industry of the Moscow Oblast Executive Committee]—with a proposal for converting the combine over to the new managerial conditions. The documents were prepared by scientists under the direction of V.M. Rutgayzer and our specialists. The preparation was complicated and indeed there was an absence of theoretical justifications and industrial analogs.

It was by no means an easy task to convince the leaders of the main administration of the advisability of converting over to basically new—contractual—relationships with an enterprise, to annual lease payments or to rejecting the norms for the distribution of cost accounting income. Indeed the Law Governing a State Enterprise calls for such income to be distributed only on the basis of norms. It contains no mention of an enterprise's agreement with a higher organization. We were assisted by active support from the secretary of the Moscow Oblast Party Committee V.F. Novikov.

The lease contract was signed by the chief of the main administration B.I. Krekov and myself on 11 February 1988, in the absence of coordination with Gosplan.

Thus, in accordance with this agreement with the main administration, the collective undertook a lease for 8 years for all of the buildings, installations, equipment, housing units and objects of a social and cultural nature. In the process, we obligated ourselves to carry out the annual and five-year plans, the state order and contractual deliveries, to improve production on the basis of NTP [scientific-technical progress] and direct contractual relationships with scientific-planning and design organizations and to sell the output of a state order at the current wholesale prices. The combine bears complete material responsibility in conformity with the law for the protection of socialist property and for observance of the interests of the state and citizens, for the fulfillment of obligations and for profitable operations.

The main administration accepted the responsibility of supplying the combine with the needed raw materials and other materials in conformity with the production program (anything in excess of these amounts would be the concern of the collective itself); with equipment, transport vehicles and earth-moving equipment in 1988 at the combine's expense; with instruments and spare parts; to provide assistance in supplying the combine with technical documentation and materials for the introduction of promising scientific-technical achievements.

Certainly, it is impossible for a wolf to conclude an "equitable" partnership agreement with a sheep. Nevertheless, that which we have accomplished a ready represents strong forward movement.

In conformity with the agreement, the combine independently disburses its cost accounting income, which is obtained after the material expenditures, credit percentages and the lease payment to the main administration are deducted from the gross earnings. Earlier, as a subsidized enterprise, we were released from having to make payments for the funds or for labor resources. In 1991, we will commence making payments into the funds.

Acting upon its own discretion and without any norms released from above, the labor collective's council distributes the cost accounting income among the fund for the development of production, science and engineering, the fund for social development and the unified wage fund. It evaluates monthly the operational results of each department based upon an analysis prepared by the combine's financial service and the bank. (We categorically oppose the much-publicized check system and conversely we seek the means for reducing reporting and for simplifying accounting).

When our draft leasing agreement was discussed in the USSR Council of Ministers, it was feared that the collective would protest the productive capital and insist upon the regular norm: the enterprise must clearly assign not less than 40 percent of its cost accounting income to the fund for production development. We succeeded in avoiding this barrier, which infringes upon the freedom

of a collective and applies a definitely different value to money for the funds. Such a norm is superfluous when the anti-expenditure mechanism enters into operation (we are not paying a bonus for a savings in material resources; it is now being collected from the collective and is increasing the cost accounting income, while its penalties are decreasing). However, an attempt is being made to include this barrier in the draft Law Governing Leasing.

In my opinion, we have not succeeded in avoiding another unnecessary norm—between an increase in the average wage and an increase in labor productivity (in the amount of 0.85). In conformity with an order from the central organs, this ratio will be controlled quarterly by an incremental total for the 1988 base (and not for 1985 as was the case earlier). Commencing with the first quarter of 1989, we fully rejected the tariff rates and official salaries and converted over to the share system of wages, with the contribution and share by each individual to the cost accounting income being evaluated by a special commission.

A lease contract specifies the production of goods in a five-year plan volume and is not planned for each year based upon results already achieved.

The collective independently decides which structure our combine is to have, the staff workforce, salaries and work regime and it defines the product types and volumes and the services requiring payments (in excess of the state order and contractual deliveries) and it participates in the technical re-equipping and modernization of capabilities.

A tremendous positive factor lies in the fact that at the present time all amortization deductions remain at the combine (320,000 rubles), whereas prior to the lease they were centralized and redistributed—only crumbs were left for us. The residual value of the fixed capital leased by the Butovo Combine amounted to 1.6 million rubles and is amortized to the extent that it can be. When we converted over to the lease arrangement, officials from the party's Central Committee noted that it would be easier to demolish everything using a bulldozer and build anew rather than carrying out repair operations.

Thus we are building at the present time. In 1988 we invested 800,000 rubles in production development (280,000 rubles in 1987) and we rejected centralized capital investments entirely (50,000 rubles worth of such investments were proposed for us for 1988). Overall, during the 8 year lease period, without accepting any money from the state, we intend to carry out construction and to acquire equipment valued at a minimum of 6-7 million rubles.

Permit me to add a few words concerning the payment for such independence. Who did we lease the means of production from? Both prior to and during the lease they remain with the enterprise. In accordance with the Law Governing a State Enterprise, an enterprise is authorized to be in command of such means of production. Thus a

serious question arises in connection with lease payments. Here let us put in a word for the economists. In actual practice, they are still being formed on a contractual basis. Our main administration insisted upon introducing the following condition into a contract: "lease payments can be revised if the profit increases in a disproportionate manner," and if this weakens the essence of the lease. We succeeded in avoiding this.

How do we calculate the lease payments? For our branch, a rate of increase in profit of 3 percent was planned. By agreement with the main administration, we reached a figure of 6 percent taking our future income into account. In accordance with the norms adopted in the second cost accounting model, we determined how much resources were needed for forming all of our funds (proposed cost accounting income) and we took into account the risk fund. The difference between the computed and cost accounting income amounted to the value for the lease payment in the form of fixed payments to the main administration (1988—35, 1989—50, 1990—100, 1991—58, 1992—89, 1993—100, 1994—110 and 1995—130,000 rubles). In 1991, we will introduce a payment into the funds (1991—86, 1992—88, 1993—90, 1994—92 and 1995—94,000 rubles). We are of the opinion that there is a more preferred path to be followed: collect money from the enterprise's workers, supplement it with bank credits and redeem all of the fixed capital at its residual value. There will generally then be no lease payment and there will be an enterprise of collective ownership. I categorically oppose a system in which amortization deductions are included in a lease payment. They are presently being included in the production cost and in this manner they increase the cost of our products. First of all, we must repair and restore our equipment and, secondly, we must develop new production operations. Why should enterprises turn over their amortization deductions?

What is the material basis for the independence realized by the combine? During 1988, marketable output and labor productivity increased by 28 percent, wages—by 22 percent and profit—by a factor of 2.5. In 1989, we plan to obtain 1.5 million rubles worth of profit (1988—800, 1987—300, 1986—80,000 rubles worth).

We often hear the question being asked: where does such profit come from if there were no changes or reductions in the personnel staff? Can it really be a matter of a lease leaving us free to act?

The attitude of the personnel towards the economy has changed. It is now having a direct effect upon the cost accounting income. The anti-expenditure mechanism has been placed in operation. I will cite only several examples. Over a period of one and a half months, we established an autoclave for the production of liquid glass which lasted for 7 years. The production of this profitable product increased considerably. We are increasing the production of foam plastic (4 rubles of profit for 1 cubic meter). The combine's output production volume increased on the whole but electric power

and gas consumption remained the same. Electric power meters were supplied. We were released from having to borrow transport vehicles and we purchased two new motor vehicles and restored three old ones. Earlier a vehicle cost us 95 rubles to operate for a shift and now—including wages, amortization and fuel—35 rubles. Moreover, all of the technological requirements are presently being met by two vehicles, the drivers of which, under the new conditions, are providing maximum return and monitoring their equipment. Naturally, their wages have increased.

The collective as a whole has undertaken to display concern for its brick shop, which earlier was the combine's most unprofitable undertaking: in 1987, the shop's losses amounted to 170,000 rubles, monotonous, low-skill labor, low earnings, high personnel turnover and the workers were employed for only one and a half of four shifts. The "rich" shops consciously shared with it a portion of its cost accounting income. They raised earnings, converted over to triple-shift operations, they eliminated the need for "attached" workers and a special contingent of LTP workers considered to be unprofitable for the combine and they repaired equipment using their internal resources. Success was realized in lowering the production cost for brick to 45 rubles (1987—57 rubles) compared to a wholesale price of 50 rubles and a retail price of 68 rubles, that is, this production operation began to produce a profit. We did not raise either the wholesale or retail price for the bricks. The framing from the used brick, which earlier was set ablaze throughout the territory, is now being sold for firewood.

Usually one hears the statement: you restored elementary order, so why then do you need a lease here? But indeed nature does not hold any fantastic factors for growth in profit. A need that is understandable to everyone simply exists for stimulating growth in profit and independence. Under lease conditions, an individual ceases to be indifferent and personal interest becomes involved. We now possess the purpose and means for development.

Many leaders justify their lack of initiative and inaction by references to the endless shortages, the absence of wholesale trade in the means of production and others. Certainly, this is not hindering us. But it must not be forgotten that 450 billion rubles worth of materials and 180 billion rubles worth of equipment are lying idle throughout the country. We must search for and organize additional opportunities for rapidly developing an enterprise, for the production of products deemed suitable for exchange and for obtaining currency. For example, we opened up a company store which sells brick, foam plastic and furniture that we produce. In the future, the assortment of products here will be increased by the addition of chandeliers, shaped window frames (technological lasers will be used for their production). Plans call for the organization of our own artistic trade. We are holding paid consultation. Indeed, it is not enough to propagandize a lease verbally, but rather we must show a specific collective how it can convert over to one.

We concluded an agreement for collaboration with a Bulgarian brick plant and we are planning not only the joint development of brick production at our combine but also the construction and chief-assembly of brick plants both in our own and in "third world" countries. The Austrian Fuks Firm is furnishing us with assistance in our technological completion work, but the equipment must be domestic. Work will be completed this year on the preparation of planning documentation for brick plants "for sale." And by the end of the year we plan to build in Butovo the first such plant with an annual capability of 15 million bricks for "working out the series."

There is still one other important source of funds for development—money from the combine's workers. Commencing in May 1988, we introduced two types of contributions. A card for share-savings was established for each worker in the combine's bookkeeping office. He cannot receive a portion of all of this payment (we pay his salary once each week—on Wednesday). We do not refer to these cards as stock-shares, since there is no securities market. The second type of contribution—our worker is authorized to invest up to 5,000 rubles of his personal savings in the combine's development. An interest rate of 6 percent (at the interest level for credit) is paid out from the cost accounting income for both types of contributions. It bears mentioning that we have for all practical purposes rejected credits coincidental with the appearance in circulation of the funds of the combine's workers.

Allow me to direct attention to a very important question which has still not been resolved legislatively: at the expiration of the 8-year lease contract, who will own the means of production procured by means of this profit and also that which remains after the lease payment has been made and the money paid back to the combine's workers? I assume that it is our collective property. Shares of stock must be issued for it which their owners should be allowed to dispose of at their discretion. It is my firm conviction that we must not be required to make payments into the budget for fixed capital acquired using an enterprise's resources.

In order to prevent a collective from being worse off at the expiration of a lease than it was at the start, because of fault on the part of the main administration, we introduced a new initiative—at our combine we wish to create the non-departmental "Butovo" Firm under the aegis of the Moscow Oblast Executive Committee. Today our combine no longer needs the main administration as it existed earlier. We are resolving all problems in a fine manner ourselves, we are finding partners, we are selling our products and we do not have to seek permission from anyone in order to engage in commercial transactions.

This firm will have a "mosaic" structure, a council of directors for independent lease enterprises (construction and design), the right to purchase leased property from

the state, its own joint stock credit bank with an operations department and its own currency accounts and also access to the world market. We have made all preparations for the firm's initial operations. But here a great deal is dependent not only upon the actions taken by us.

I would like to touch upon a negative aspect of the cooperative movement, which is still being mentioned only casually. Today the ruble occupies first place there. And in our society man must rank ahead of the ruble. I have in mind social protection.

Here is just one example, based upon which it would be wrong to draw far-reaching conclusions. But there is food for thought here. Instead of the formerly unprofitable Zagorsk Plant for Fibrous Concrete Slabs, the industrial Berezka Cooperative was organized which leased its fixed capital.

During its initial months of operation, the cooperative realized 120,000 rubles worth of profit instead of 16,000 rubles in planned losses, its labor productivity increased by a factor of 1.7 and its production volume by one third. In the process, it reduced the number of its staff personnel by 25 (11 permanent workers remained and 10 contractual workers—earlier there were 45 workers) and 80 workers were released from its principal production operations. Only individuals who were stronger and could endure greater workloads remained: the Berezka regulations called for a floating 8-12 hour workday and a 4-5 day work week. Weak individuals, including women with children and elderly people were also discharged. It is well that today there are few such enterprises and that an executive committee can handle its personnel. But it often happens that an individual is deprived of some social protection.

In converting over to a lease arrangement, we did not discharge one of the combine's 430 workers, even though we were well aware of those who were lowering our labor productivity. We attached more importance to maintaining a proper atmosphere in the collective and to the personnel being confident of what the future held in store for them. And the problem of eliminating unnecessary workers is being resolved through an expansion of capabilities and the organization of new production operations. Thus we expressed social protection for a small group by a large collective. Herein lies a vitally important question, that of never setting one's hopes on a "good" first leader. A need exists for a clear and completely responsive state policy.

We are creating the conditions required to enable each worker to produce the required return. Thus, for the first time in the country, our three production operations (brick, transport department and housing and municipal services) have been converted over to a 40 hour work week. Certainly, a long wait may ensue before someone changes the legislation. But I am convinced that with the present bureaucratic structure we are obligated to advance forward and not to bring up the rear. Today importance is being attached not only to providing

personnel with an opportunity to earn but also time for meaningful recreation, for satisfying their interests, for raising their cultural level and for educating their children.

In May 1988, our collective released war veterans from having to pay income tax and apartment rent. Today this privilege has been extended to include all veterans of labor at the combine. All those departing on vacation are provided with material assistance (50 percent of the wage rate or salary). Those who violate labor discipline are deprived of this privilege. A flexible work schedule has been introduced into operations. A sports complex with a swimming pool are to be built on the territory of the combine. A holiday entitled "Combine Day" is to be held on the first Saturday of July.

Certainly, the cooperatives are striving to alleviate somewhat the living conditions for their workers and to ensure that they earn their salaries: cottages are under construction, cooperative points for domestic services are being opened directly at the enterprise, the products for which are being purchased at kolkhozes. However, this is for those who remain in the cooperative and who endure the strong competition.

And there is still more. The cooperatives are being established considerably more rapidly than our state enterprises. And this is being done correctly. Problems are to be found in any mass endeavor. They quickly fill up a void. But they are supplemented to a large degree by prices. This same Berezka Cooperative raised its prices by 30 percent for its above-plan output and to the exclusion of the state order. This represented pure profit in the absence of an inflated staff and an abundant amount of paper accounting work and with negligible overhead expenses. One must not forget that today the cooperatives pay the state 20 times less than do the state enterprises. Herein lies the problem.

True, the prices become inflated and not only the cooperatives are left with a cheap assortment. Unfortunately, this phenomenon has become massive in nature. With one stroke of the pen, the consumers solve the financial well-being of the enterprises. Tomorrow we can raise the price for above-plan brick up to 100 rubles and still a line will form! But we do not proceed on the basis of such high-principled considerations. It is simple enough to merely raise the price. But it is considerably more difficult to achieve a reduction in the production cost to 45 rubles against a wholesale price of 50 rubles. In such a case, one cannot count upon a high principled position of a particular leader.

During the present transitional stage, in which we have not mastered the economy, a need will exist for several years for administrative and, to the extent that they are possible, economic measures aimed at eliminating a cheapening of the assortment and price inflation. In particular, more frequent proposals are being heard calling for the active use of limit prices, the elimination of far-fetched mark-ups, for leaving only one "N" index

for the clear characteristics of new products, for increasing the responsibility of the trade in price formation and for raising the role played by a state order in the formation of socially low prices with the simultaneous introduction of stimuli for the profitability of a state order for producers.

A system of taxation must be worked out. This is a complicated question and one which requires an immediate solution. Today everything is confused throughout the world: the prices for machines, equipment, raw materials and other materials differ sharply according to the managerial forms. By no means do I believe that a single approach is mandatory for all. In my opinion, only a system of correct taxation will be capable of producing economic order. It is precisely with the aid of taxes that the priority trends should ideally be developed.

What should be taxed? It is more correct to tax profit and the consumption fund of an enterprise and not just the wage fund, as is generally practiced. Today there are many at least enterprises who take advantage of the imperfections in price formation and taxation for the purpose of obtaining high income. A fixed payment is deducted while colossal profit remains at the enterprise. It is inconvenient to raise wages excessively and active use should be made of another channel—free high quality nourishment, passes to resorts, cottages for 50 percent of the cost and others. Thus a tax should be imposed upon everything that raises the material well-being of an individual.

Appeals are presently being heard for making more active use of leasing. But this requires that department chiefs, foremen, brigade leaders and workers be taught how to think in an economic sense. And today not even our administrative staff has mastered economics. It is not enough to merely teach the personnel. They must be furnished assistance in overcoming an erroneous world outlook, such that they will come to realize that their income, working conditions and recreation are dependent upon themselves. And here success is dependent 90 percent upon the director. Our combine was visited by 700 delegations. Of hundreds of leaders, only one turned out to be an intellectual. This was unfortunate! And particular in connection with converting over to a lease. A conversion over to this progressive form of management on the basis of an order or schedule is capable of ruining a fine undertaking. This cannot be tolerated.

#### **'Stroypolimer' Plant Improves Efficiency**

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[Article by B.N. Makharinov: "In Search of Prospects"]

[Text] When the Butovo Construction Materials Combine was preparing to convert over to a lease-type arrangement, there was no discussion with regard to transforming it into a profitable enterprise (the "Stroypolimer" Plant had a profitability of 34 percent). The

oblast suffers from a shortage of our products (linoleum, washable wallpaper, glue and foam plastic). We could develop more rapidly and furnish more products, but we are inhibited by endless bureaucratic obstacles and by the absence of resources and stimuli for creative work. But when the Butovo workers revealed their initial successes, our initiative was supported in Glavmosobstroymaterialy [Main Administration of the Building Materials and Structural Parts Industry of the Moscow Oblast Executive Committee]. We converted over to a lease in April 1988. We were assisted by the Moscow Oblast Party Committee, which literally encourages progressive methods during the first stage, despite the fact that the directors themselves do not understand nor believe in their effectiveness.

In our case, the initiative came from below, with the upper echelons being receptive. But this good will on the part of the main administration turned out to be not as obliging as it appeared to be at first glance. The higher organization actually has a mass of possibilities for dragging out the authorization of a lease and for haggling over a fixed payment for itself. Active use in the form of arguments was made of references to the need for having a strong centralized fund, from which, support could be provided for unprofitable enterprises at the expense of profitable ones. As a result, there was a loss of stimuli for the development of both categories. This became a very sore subject.

What can be proposed here? Certainly, it is not possible to reject immediately a redistribution of funds. Thus, let us do this gradually. Taking into account the financial situation of enterprises subordinate to the mentioned ministry, it would be well to establish a realistic schedule during which wage levelling would be eliminated with the aid of stimuli: for unprofitable enterprises—in the form of annually reduced fixed subsidies and for profitable enterprises—decreasing payments into the ministry's fund. With such prospects available, both these and other enterprises will seek out opportunities for carrying out effective work. As a reduction takes place in the fixed annual payments and subsidies, we reach a situation in which the funds transferred to the main administration must cover only the expenses for its maintenance.

However, we agreed to make payment only when the main administration provided us with the needed services (planning, forecasting, development of technical progress at the branch scale and so forth). In this instance, a superstructure of the basically new type is advisable. Our main administration is presently being converted over to a cost accounting organization. Its operational principles are being discussed actively in the collectives of subordinate enterprises. They have all converted over to lease type operations. As far as I know, this will be a state-cooperative association. The association's administration, its chairman, structure, wage system and others will be defined in a decision handed down during a conference of leaders of labor collectives of previously subordinate enterprises. Here we will learn what we will be making payments for.

A proper question: who will lease the fixed capital and from whom? In accordance with the Law Governing a State Enterprise and the Constitution, this capital is placed at the disposal of an enterprise, although it actually belongs to the ministry. Today's lease relationships reflect more the requirements of labor collectives from the standpoint of time rather than the possession of state property. Our lease agreement defines specifically how we are to use this property, how much is to be paid and to whom. And although the contractual relationships between a labor collective and a higher organization are still far from perfect, a fixed payment places everything in its proper perspective. In particular, under the new conditions we began using credit, which earlier we avoided. There was no reason: a loan was repaid and all of the profit from expanded production was gathered up by the main administration.

Our lease agreement contained no special stipulation governing our right to sell fixed capital. It was believed that everything was permissible provided no prohibition was in effect. We ourselves decided what equipment could be purchased or sold. For all practical purposes, the collective leased not specific property but rather capital and at any moment it was responsible for its availability. Thus, by no means are we linked to the main administration on the basis of an agreement for the rental of property. And yet this is precisely the definition found in dictionaries for a lease.

We signed our agreement for the period up to the year 2000. A fixed lease payment was defined as a result of a unique trade with the main administration. Naturally, at the moment the agreement was concluded, it could not be less than the payment planned earlier. Here we had in mind a higher price for a lease and a reduction in the fixed payments over the course of an extended period of time. We stipulated that our payments of 1.5 million rubles would be lowered by 3 percent annually beginning in 1991. In addition, the plant would make a payment into the budget (payment for funds, labor resources, withholdings from profit). It amounted to 1 million rubles at the moment we converted over to a lease. Aware that the budgetary receipts must increase, we ensured that the agreement called for annual increases in the payments and particularly by raising the payments into the funds from 3 percent during the 12th Five-Year Plan to 6 percent during the 14th. Here there could be various proposals, one of which could be the preparation of a directive lease document—to establish the budgetary payments according to the actual level for a particular enterprise and to establish a tax in the amount of 30 percent of the increase in cost accounting income.

According to our agreement, amortization deductions remain at the plant (300,000 rubles). Is this correct? There is no simple answer so long as one question remains unresolved: who owns the fixed capital acquired by means of the collective's cost accounting income (following all payments into the budget and to the higher organization)? We do not have collective ownership and

thus it automatically becomes state property (in cooperatives the situation is different). How is it possible to discuss the transfer of amortization deductions over to a higher organization if they are to be used for simple reproduction?

In transferring amortization deductions over to a higher organization, a collective purchases all of its fixed capital for the period of amortization. And what then? This important question is still awaiting a decision. For example, we propose, for the amount of the cost accounting income (less the unified wage fund), to issue shares of stock to the members of the collective in conformity with their labor contribution (proportional to their wages) and with the payment of dividends. An appropriate statute was developed at the plant which, notwithstanding a certain amount of fear and risk on our part, we intend to introduce into operations in the near future.

It turns out that we are now turning over to the state, for credit purposes, the funds that we have acquired. It is gradually purchasing them from us while paying dividends. The stock shares are valid throughout the life of the worker and are inherited only by the state. That is, the fixed capital of enterprises remains the property of the state. In my opinion, such an approach is in keeping with the interests of our social system on the whole and each worker who is interested in the reproduction of fixed capital. But indeed the additional resources are once again consumed. Yes and yet they are repaid many times over as a result of stimuli leading to more effective work by the real master and not a hired worker.

The successful dissemination of lease relationships requires wholesale trade in the means of production, with the deficit raising endless problems. Fortunately, we ourselves are producing products which are in short supply and thus an absence of such trade is not unduly affecting our plant. We are concluding agreements for additional deliveries of raw materials and other materials and we are attracting the resources of enterprises which are interested in our output for the purpose of expanding production.

Under the conditions imposed by a lease, we have changed our approach towards the earning of funds. We now establish our goals based upon our requirements. What do the plant's workers wish to have by the year 1995? We conducted a poll. It turned out that the average earnings must be raised to 500 rubles. The mentioned measures for improving the social sphere (three apartment buildings, a dormitory facility, a club, a school and others) will cost the plant 3.2 million rubles. In conformity with a decree of the USSR Council of Ministers, we are being allocated 50 million rubles for the social development of Moscow Oblast. Over a period of 9 months, under the lease conditions, we earned 1.3 million rubles over and above the amount planned for 1988. In 1989 we expect to at least double this figure.

Thus the plant has money available for development. But who will carry out the planning and building? In the past, the building work was carried out by Glavmosoblstroy [Main Administration for Construction in Moscow Oblast]. If these construction volumes are turned over to it, then the work will be dragged out for many years. We are relying upon the cooperatives. I believe that today this represents the most productive path to be followed.

The powerful Kurs Cooperative will carry out the planning and building for us. Initially we asked ourselves why considerable funds should thus be released and would it not be better to create our own construction subunit? We expanded the repair-construction department, purchased crane equipment and established a solvent shop. We are now turning all of this over to the cooperative on a lease basis. This will be more effective. The Kurs Cooperative is commencing the construction of tourist complexes and it requires high quality finishing materials. It is not a simple task for the plant to organize the production of these materials. It is another matter entirely if the work is carried out on a joint basis. The cooperative can enlist the aid of scientists and specialists and promise assistance in the installation and adjustment of equipment. And all of this can be accomplished in a rapid manner.

The cooperative forms for labor organization are attracting our attention. Four small cooperatives have been created at the plant (for processing the waste products of production, for housing construction and the repair of apartments and for protecting the plant instead of non-departmental protection). We intend to proceed further and to organize a cooperative in which all of the plant's workers can become members. What do we have in mind here? At the present time, more than 30,000 tons of production waste products have accumulated at the plant. They must be processed in order for us to produce savings, in the absence of which we will be unable to proceed with our planned technical-economic break-through. Thus we made the decision to work a sixth day under cooperation conditions and thus have substantially greater opportunities, particularly in the area of wages.

#### **An Intra-Plant Lease**

At first glance, the dissemination of a lease to lower collectives appears to be absurd. Really, why does a department require a fund for social development? It will not erect a building itself. I doubt if there is a worker today who correctly understands the value to him of a fund for the development of production, science and engineering. He is interested mainly in his earnings. The mechanism for distributing it has been worked out well at the plant during 2 years of work under a collective contract. When converting over to the lease, we assigned ourselves the task of creating a firm with a high consumption level, with working and domestic conditions that are in keeping with the modern requirements and with a developed social sphere. Imagine if you will the

granting of a lease to a department that operates under varying conditions in terms of reserves and opportunities for utilizing the achievements of scientific-technical progress. What will be the situation 3 years later if the wages in one department increase by threefold compared to another department? It will be a calamity. It will not even be possible to dream about a stable collective.

We have some sad experience in this regard. When converting over to the lease, the basic wage in the consumer goods department turned out to be higher than that for the principal departments. Decrees were prepared for stimulating the production of consumer goods. We encountered conflicts over a period of 3 months: workers in the principal departments protested against such a base, they threatened to transfer over to the consumer goods department and the workers in the latter refused to change it. It became necessary to increase the basic wage in the principal departments, since the opportunity was available. During 9 months of lease operations, the average wage for the plant increased by 45 rubles (271 rubles).

What conclusion can be drawn? Is an intra-plant lease advisable? Up until recently, I opposed it for the mentioned reasons. But I was won over by the possibility of strengthening the stimuli by drawing the workers closer to the means of production. We developed a system of non-normative intra-plant cost accounting, on the basis of which all structural elements of the enterprise without exception are converted over to lease operations. In my opinion, it is suitable in all branches and not just in industry.

The basic cost accounting income, the basic wage and the basic level for development and effectiveness are determined for each subunit for the preceding year. Proper questions: where does the cost accounting income come from—from an auxiliary department or a kindergarten and how is it determined? Herein lies the essence of the matter.

The cost accounting income obtained by the plant in 1988 naturally belongs to the entire collective. But how much is due to whom? If we recognize that wages are paid out in conformity with the labor contribution, then the cost accounting income is legally distributed proportional to the earnings of the structural subunits. This is the direction we followed.

The basic earnings, proportional to which cost accounting income is distributed, are computed in the following manner. Working under the conditions of a collective contract, we determined the ratio of the proportion of wages for each collective compared to the overall amount for the plant. We corrected this ratio and retained it for the entire period of the lease. Only the labor collective's council is authorized to change it, with consideration being given to the more important concerns (creation of new production operations, elimination of some sectors and others). The wages for the entire

collective during 1988, computed in accordance with the established ratio, are considered to be the base for 1989.

The basic level for the development and effectiveness of a subunit is understood to mean the level achieved during 1988 for the production of goods, the rendering of services, expenditures of raw materials and others. For auxiliary departments it is the level achieved in idle time in the principal departments, the volumes of repair and construction-installation work and others.

Fixed capital is turned over to a structural subunit on a lease basis and the subunit subsequently handles its amortization fund on an independent basis, provided it is all planned. Its task consists of increasing its cost accounting income by all possible means, since throughout the year the wages earned by the collective of the entire plant is distributed proportional to the cost accounting income of the subunits and not in conformity with the ratio discussed above.

Such freedom continues throughout the year, during which period nobody is authorized to distribute the cost accounting income of a lease subunit or its corresponding wages. Commencing with the new year, a new base is determined for the cost accounting income, earnings and the level achieved for development and effectiveness based upon the same principles employed for the previous year.

Thus the mechanism proposed by us stimulates workers to the maximum possible degree to perform efficient work throughout the year. Thus the possibilities (starting conditions) for the structural subunits are smoothed out, but at a higher level for all concerned. Importance is attached to ensuring that a campaign is carried out aimed at increasing the cost accounting income and not necessarily the earnings and thus we can proceed in the absence of coefficients.

For example, one department presents another with a claim for damages amounting to 20,000 rubles. Earlier we carried out a punishment with a reduction in wages. But how can such losses be compensated? Today there is a simple solution: the full amount is withheld from the cost accounting income of the guilty department. Who is specifically guilty and how is he to be punished—this is decided by the collective which caused the loss and which accordingly lost a portion of its wages (determined proportional to the cost accounting income).

Today the cost accounting income of the plant's entire collective is naturally being distributed among those subunits which are establishing their relationships on a contractual basis. The entire effect obtained over and above the basic level is increasing the cost accounting income and all losses are reducing it. For example, the basic amount of idle time of 100 hours was established in the principal department in 1988 owing to fault on the part of the mechanical department. The principal and mechanical departments are concluding an agreement between themselves which establishes the proportion for the distribution among them of the additional cost

accounting income to be obtained as result of the elimination of idle time. The same holds true for an increase in idle time, but in this instance towards a reduction in the cost accounting income.

The impression is being created that almost the entire increase in cost accounting income accumulates in the principal departments. But this is not true. All of the other subunits are striving to ensure that the work of the principal departments is carried out on the basis of agreements. Allow me to cite an example which describes the new attitude towards the introduction of scientific and technical achievements. The chief of one of the departments has estimated that an expansion in the printing sector for washable wallpaper will furnish an increase in cost accounting income of not less than 1 million rubles annually. Numerous agreements and authorizations are required for expanding this dangerously explosive production operation. The plant administration has provided another path for solving the problem, having concluded an agreement with this department according to which it will receive 5 percent of the increase in the department's cost accounting income. Help was sought from scientists of the branch institute who developed a printing technology in the absence of volatile solvents and they designed a non-explosive printing machine. It can be made available to the department in the absence of external agreements.

But the machine must still be produced. In the past, the chief of the department would turn to the chief engineer and receive a "natural" rejection—his concerns could be met completely in the absence of a printing machine. They have now concluded an agreement in conformity with which the department of the chief engineer, in addition to the payment for the production and placing in operation of the machine, will obtain over the course of a year's time 10 percent of the increase in the department's cost accounting income obtained as a result of the operation of this machine. But there is one important condition—the machine must be produced and placed in operation within one month following the signing of the agreement. Although improbable, nevertheless it is a fact—it commenced operation within the period stipulated! It should be noted that generally speaking such printing machines are not being produced in the USSR.

Will the engineer, over the course of a year's time, obtain additional cost accounting income and wages in keeping with such income that will be paid to him fully in accordance with the estimate for the production of the printing machine? Yes, this should be the case. For creativity and efficiency. These are stimuli which make it possible not to reject but rather to introduce NTP [scientific-technical progress]. And we will all profit. The principal department and those which furnish it with assistance will receive additional awards. At the end of the year, the plant's entire collective will receive an increase in wages (the overall wage level will be raised). The state will receive additionally more than 3 million square meters of deficit washable wallpaper.

We do not have any basic problems with regard to distributing a portion of the cost accounting income to the fund for the development of production, science and engineering or to the fund for social development. The council of the labor collective decides where it is to be used in the interests of the entire collective.

#### "Conveyer Line" in Intra-Plant Administration

The existing command-staff system in which each department has a chief and each chief has several subordinate individuals who are unable to display their own initiatives is completely ineffective. As a director, I was able to exercise control over the workloads and employment of 93 of the plant's engineering and technical workers. Such a review and control is needed in the interest of concentrating their efforts on rapidly carrying out, in keeping with the available resources, the principal tasks confronting the enterprise.

Towards this end, we introduced during the first stage a matrix structure for controlling the centers of responsibility, headed by the director and his deputies. Each engineering and technical worker is linearly subordinate only to the leader of his center. The remaining vertical and horizontal relationships are only functional in nature. Today the chief specialists do not command but rather they direct the processing of information, which is the object of administrative labor. We organized a so-called "conveyer line" technology for administration.

What is the purpose for placing the "conveyer line" in operation? I gathered the specialists together and validated the need for carrying out the mentioned task, to the extent that it affected the cost accounting income. For example, we undertook to organize within a limited amount of time the production of highly non-static linoleum which we developed. There was an acute need for it, especially for computer centers. As tests conducted by the USSR Academy of Sciences revealed, the computers then work efficiently since no static electricity is accumulated. If the department furnishes everything that is required (this must be done for the "conveyer line"), then the production of linoleum can commence within a matter of days. Up until recently, months and even years were required for the coordination and organization of such production.

We held a discussion on whether or not the subunits were prepared to carry out this task. There are those who believe that they are already being overworked. We investigate the matter thoroughly in the interest of determining if this is true and what help should be provided. Quite possibly the tasks will have to be regrouped or the planned schedule will not be realistic. Then which will be more acceptable? We agree and reach a common decision. Thereafter, each individual, based upon the overall schedule and the general subject plan, composes his own plan for his sector while bearing in mind the assigned period of time.

All of the engineer and technical workers are retained at their "conveyer line" posts and this makes it possible to

plan and schematically reflect the input and output information and the technology for processing it right up until the decision is adopted. The posts are determined in conformity with the key oblasts for solving the problems. At his "conveyer line" post, each worker maintains a log on the technological processing of information up until the decision is adopted. He is obligated (and this is the only condition of a standard nature) to systematically plan his work for each day. Let us assume that the information from one post did not reach the next one in a timely manner. The "conveyer line" comes to a halt. In such a case, the leader intervenes. In order to evaluate the situation, it is sufficient for him to examine the technological chart of the worker at the post where the slow-down took place. Moreover, such a chart and the status of affairs at the post clearly reflect the professional level of the worker. We do not determine the coefficients for labor participation by the ITR's [engineering and technical workers] in the belief that such a procedure only belittles their efforts, even if they commit mistakes from time to time. A more acceptable procedure is that of periodically examining the basic earnings of the workers based upon specific justifications obtained as a result of a review and control over the deviations in the normal operation of the "conveyer line."

I have mentioned only several trends which we are following while operating under lease conditions. I am convinced that our work has neither limits nor trivial aspects. A sense of increasing competition has appeared among us. It is unfortunate that many have given no thought to this aspect.

#### Difficulties Encountered

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[Article by Z.Ya. Malkina, former chief economist at the Metalloplast Plant in Lobnya: "Difficulties and Methods"]

[Text] Today many enterprises are already operating under lease conditions. The economists are analyzing and summarizing experience. This is useful to know and yet certainly there can be no prepared recipes. Each individual must work out anew the required methods and recommendations. In this laborious work, it is helpful to be aware of the possible "submerged" shoals. I would like to discuss those which our plant encountered since converting over to a lease beginning in July 1988.

The most difficult involved not so much coordination with the various aspects of the agreement and organizing the work in conformity with the new conditions, but rather they had more to do with the psychological aspects.

Any changes in an economic system are dependent upon those who implement them. Thus there was no reason to hope that the lease would be introduced in the standard

manner. This new managerial form requires enterprising leaders who are willing to accept a risk. And unfortunately there are only a few of them at the present time. They interfered with the command-administrative system and it rid itself of them, preferring instead to train new individuals. The first lease precedent appeared in industry owing to the enthusiasm displayed by the director of the Butovo Construction Materials Combine M.A. BOCHAROV. In the absence of such individuals—business-like and industrious leaders—it is impossible to hope for success.

Delegations constantly visited the Metalloplast Plant in the interest of acquiring experience. Many leaders are still pondering the situation: why change a relatively calm and covered by instructions life for an opposite type, one which requires a search for and the undertaking of risky solutions while constantly remaining in doubt as to the means available? Truly, why? The plant is profitable, the workers receive an average wage of 200 rubles and this is good. But the change will bring worse conditions. NEP [New Economic Policy] (1921-1936) was also introduced in a serious manner and for an extended period of time and yet after several years it was done away with by Stalin.

Our collective certainly entertains doubts. With a profitability of 40 percent, we noticed progress with each month. We were instructed to convert over to a lease and they hurried us along in this direction, with no time available for preparation. The proposed administrative plan for converting the collective over was accepted in a rather passive manner: "If we must, then we must." At the present time, this attitude has changed. Why?

I was convinced that during the first stage the workers accepted the lease because of the money involved—for a long time now, nobody has believed the promises made. When the earnings of the personnel increased during the first quarter of work under the new conditions, as a result of growth in the cost accounting income, I explained during the course of economic training where the additional money came from and what had to be done in order to obtain more.

In my opinion, the most important consideration in the new managerial method is the opportunity to work and live in a creative manner. It could be said that the unprofitable Butovo Construction Materials Combine rushed into a lease because it had nothing to lose. However, it is better to place emphasis upon the newly found work freedom and creativity.

When we made preparations for distributing the cost accounting income, we literally had to convince ourselves: "We are already able to share our earnings!" It is important to recognize that we now have the right, in the absence of instructions from on high, to decide the fate of the means of production turned over to us and to create better working and living conditions. Although by no means have all of us succeeded in examining the established stereotypes. "How is it possible to pay so

much money to people for that which was condemned earlier?" asked the chief of the Labor Department.

The enterprises are only now learning how to distribute the cost accounting income and to measure today's advantages and future prospects. As a practicing economist, I am firmly convinced that the danger of productive capital being consumed by a leasing enterprise is fully realistic. I am completely familiar with arguments of the following type: the present master does not tolerate a "thawing" of the fund for development and others. But what if the master is not the true one? Then a need will exist for a normative ratio between the increase in average wages and the increase in labor productivity.

The fund for production development at the Metalloplast Plant is substantial and it will continue to increase further. It is confronted by an acute problem which, it bears mentioning, is not understood at the Butovo Construction Materials Combine or at the Khlyupinsk Stroyopolimer Plant—what is to be done with this money in the absence of a wholesale trade in the means of production? The fact of the matter is that Metalloplast, similar to many other enterprises, unfortunately does not have a "convertible currency" at its disposal—deficit brick, linoleum, finishing materials and others. Even though they be only nails, they are still in short supply. Thus it is very difficult to utilize a developmental fund at one's own discretion. Certainly, in the final analysis the plant is nevertheless deceived. The very concept of production expenses long ago lost its original meaning and instead is viewed as expenses for illegal activity.

The process is also being impeded by other shortcomings of the economic mechanism. We do not have in mind a situation in which a state order (one of today's uninsured state orders and not that which formerly an enterprise would compete for) encompasses practically all of the economic activity of a leasing enterprise (at the Metalloplast Plant this constitutes 100 percent of the consumer goods). Where is the possibility of maneuvering? Petty support which the plant does not need continues to prevail.

A leasing enterprise still cannot select its own partners or suppliers. Metalloplast is operating under the new conditions and it still does not have this privilege. It has endless problems.

Just as in the past, the upper echelons require information which is not needed by the enterprise itself. This is obviously done for the purpose of imitating administration and for maintaining control over the plant. I believe that it is fully sufficient for a leasing enterprise to render a report only on its fulfillment of its financial obligations and the state order. Everything else is part of its internal affairs. In this manner, reporting will be reduced by a factor of 3-4.

It is also my opinion that the maintenance within the framework of lease relationships of a wage system that initially includes wage-levelling elements is unjustified.

The normative distribution of cost accounting income has been abolished, but the norms for distributing that part of it used for wages, that is, rates and tariffs, have been retained. This restricts sharply freedom of economic action. Ideally, leasing enterprises should be authorized to introduce their own wage systems. The experience of S.N. Fedorov at the "Mikrokhirurgiya Glaza" MNTK clearly demonstrated the benefit to be realized from rejecting a tariff system. Control over intra-plant distribution of the wage fund must be simplified to the maximum possible degree.

It is my opinion that Goskomtrud [State Committee for Labor] should be replaced by cost accounting centers which, in accordance with orders issued by the enterprises, would prepare recommendations for a wage system and for intra-plant cost accounting, while taking into account the specifics of the particular production operations (and not simply based upon the abstract idea of equal pay for equal labor). The enterprises are prepared to pay for such work. The instructions presently being supplied by Goskomtrud are useless for all practical purposes. It is purposeless work.

Many old instructions are still effective which affect leasing enterprises and which, if so desired, can prevent the introduction of new developments by the enterprises. It makes sense to abolish all of these instructions and to outline only that which is forbidden under the conditions of a lease. Great hopes are being placed upon the Lease Law in this regard.

The Lease Law must serve as a bridge between the laws governing state enterprises and those governing cooperation. Recent normative decisions are depriving state enterprises of the opportunity of competing against cooperatives on an equal basis. Here a tremendous negative role is being played by the transfer by enterprises of their turnover tax over to the budget. Thus a cooperative was assigned to the Metalloplast Plant. It produces the same products but under different conditions. Let us assume that for the same product the plant and the cooperative earned 1 ruble each, from which the plant returns 50 kopecks in the form of a turnover tax and the cooperative—not one kopeck. Why is it that the producers of consumer goods must pay this tax and not the trade? Of the remaining 50 kopecks, Metalloplast transfers a fixed payment over to the budget in the amount of 56 percent and the cooperative—only 3 percent. It must be remembered that the overhead expenses of the cooperative are considerably lower and the reporting not as suffocating. Today the advantage clearly rests on the side of the cooperatives. We are not against competition, but we want equal rights. It is unfortunate if equalization occurs not by means of an expansion in the opportunities of state enterprises but by curtailing them among the cooperatives.

A need exists, without being restricted by the level of the enterprises, to change the economic mechanism in this manner and in a manner such that it does not inhibit but rather promotes the development and dissemination of

the progressive forms of management, including lease relationships. In order to ensure that a lease does not degenerate into a regular fiction, cost accounting must be "made available" to the direct producers and to the production subunits. Here our points of view are in conflict with those of M.A. Bocharov. Certainly, the workers must be trained. Yes and it would be good to make the system of economic indicators for the work of enterprises simpler and more understandable. Importance is attached to ensuring that the production subunits clearly understand how much resources they are expending, how much has been saved, what is being done with the savings and how many material blessings have been realized and for what purpose—directly or through an improvement in the social level.

My attempts to achieve complete cost accounting under the conditions of our leasing enterprise were not crowned with success. Even such a widespread method as normative distribution of wages with a subsequent computation of the savings and the placing of such savings at the disposal of the departments signified a sharp reduction in the authority of the labor department and a disruption in the proportions called for in the tariff system. Indeed a savings can be distributed in a manner such that a low category worker who has high labor results can obtain more than a highly skilled worker. In this manner, a lesser role is played in the area of administering the department's workers. The plant's management supported the "opposition" to such new innovations. A lease is a lease and the command-administrative style continues (and obviously not only at the Metalloplast Plant). As a result, I left the plant.

### Survey Reveals Attitudes Toward Leasing

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[Article by V.M. Rutgayzer, Doctor of Economic Science and deputy director of the All-Union Center for the Study of Social Science, Moscow: "A Lease and Cost Accounting Models—The Results of One Questionnaire"]

[Text] The All-Union Center for the Study of Social Opinion conducted an interrogation of the leaders of 20 enterprises of the construction materials industry, trade and public catering in Moscow Oblast. Ten of them are operating under the conditions of the 1st and 2d cost accounting models and 10 have converted over to leases. In all, approximately 50 questionnaires were processed.

The leaders of the first group of enterprises will subsequently be referred to as managers. They have at their disposal and are utilizing fixed capital that belongs to the state. The leaders of the second group of enterprises will be referred to as leaseholders. A lease assumes the turning over of fixed capital to a labor collective on a temporary basis (for the period of the lease) and also

instructions for the use and payment of a fixed lease payment (budgetary payments).

At the moment of converting over to the new economic conditions, the status of affairs at the enterprises required a change in the managerial forms. This was expressed by all those questioned. Who initiated the changes? The higher organization—at nine enterprises during their conversion over to the first and second cost accounting models and at six enterprises during their conversion over to leases and the labor collective itself—at the remaining enterprises which were studied. The Moscow Oblast CPSU Committee was oriented towards the dissemination of progressive managerial forms. But even under such favorable conditions, one third of the leaseholders were forced to overcome obstacles which the main administrations had imposed in an underhanded way. In the opinion of the leaseholders, such resistance arose as a result of fear on the part of officials that they would lose their authority and no longer be needed.

The conversion over to the first and second cost accounting models, imposed to a considerable degree, left a majority of the workers of the respective enterprises with a sense of indifference—such was the opinion of more than one half of the expert-managers. A majority of the leaseholders noted that the workers at the enterprises headed by them approved of the lease conditions

What brought about the indifference or clear disapproval by the workers of the new managerial conditions? The leaders cited several typical reasons: lack of readiness or inability to operate under the new conditions, poor information owing to inadequate or ineffective explanatory work, a lack of desire to implement changes, satisfaction with one's position, low level of civil activity, interest only in personal affairs and distrust in the possibility of positive changes. These factors affect to a stronger degree those enterprises which operate on the basis of the first and second cost accounting models. This is obviously explained by the fact that, compared to leasing enterprises, the workers at these enterprises are alienated to a greater degree from the results of their labor and thus the sense of being master does not arise.

Preliminary explanatory group and individual discussions and lectures by specialists were conducted prior to labor collectives converting over to the new managerial conditions. Moreover, this was accomplished in a more active manner at enterprises which converted over to leases. At active enterprises, special emphasis was placed upon studying the methodological aids and statutes in the system of economic training. At the time of the interrogation, such statutes dealing with lease relationships were practically non-existent and their absence hindered operations under the new conditions.

In the opinion of roughly one half of the leaders questioned, the preliminary work carried out proved to be inadequate. One cannot ignore the fact that for a long period of time the people have had very little faith in

beautiful promises. In order to be convinced of their reality, they wish to "feel" the advantages offered by them (even if realized at a neighboring enterprise).

What do the collectives and their leaders expect to obtain from converting over to a lease or the first or second cost accounting models? Roughly one half of the leaseholders and managers also expressed a hope for regular renovation of their equipment, an expansion in the assortment of products and, generally speaking, improvements in the operation of their enterprises. Less than one half of the leaseholders and roughly one fourth of the managers underscored the possibility of active participation by workers in the production and social development of their enterprise. Such factors as the possibility of working in a more efficient manner and improving the working conditions were mentioned by 30 percent of the leaseholders and 17 percent of the managers. The collectives of leasing enterprises are oriented mainly towards total improvements in all of the conditions associated with socio-economic development and hence they hope for increased earnings.

Are these hopes justified? Those questioned cited the following more important successes realized at their enterprises: an increase in the independence of an enterprise in using its own resources (mentioned by 60 percent of the leaseholders and 8 percent of the managers), increased hope for substantial improvement in the operation of a collective (30 and 33 percent); the appearance of stimuli and skills for efficient management (40 and 33 percent); the operation of an enterprise became more rhythmic in nature, with less work being carried out on an emergency basis (10 and 8 percent), greater worker interest in the results of their labor (70 and 33 percent), a decreased need for wage levelling (70 and 42 percent), an increase in labor discipline (40 and 42 percent), the possibility of carrying out the work with a fewer number of workers (30 and 33 percent), a reduction in personnel turnover (30 and 8 percent) and an increase in the role played by rank and file workers in an enterprise's administration (50 and 17 percent).

Judging by the answers provided by the experts, a lease ensures considerably greater economic and social achievements than do the first or second models of cost accounting. In my opinion, this derives from the fact that it interests workers to a greater degree in the managerial results, since the methods for normative distribution of cost accounting income are eliminated.

An equal number of experts in both groups replied that the new conditions are creating favorable working conditions and with fewer employees. Roughly one third of the enterprises studied reduced their number of workers merely as a result of their labor organization and not owing to the use of new technologies (this factor has still not had time to manifest itself owing to the short period of time that work has been carried out under the new conditions).

Actually, compared to the two cost accounting models, the advantages offered by a lease in the use of resources and in stimulating the work and economic activity of an enterprise were recognized not only by the leaseholders but also by almost one half of the managers. At the same time, several of the expert-leaseholders failed to see any special advantages in the use of a lease. In my opinion, this is explained by the fact that a conversion over to a lease is not always carried out on a voluntary basis. But it is impossible to forcibly make an individual happy. Formalism has still not been eliminated in all respects. At times the "sign" was changed and the work was carried out in the old manner. Consequently one third of the leaseholders did not realize the advantages of a lease, compared to the cost accounting models, with regard to stimulating labor and strengthening economic independence. Adequate leasing forms for the participation of workers in administering production operations have still not been found.

Nevertheless, the advantages of a lease were obvious for a majority of the experts. This is why roughly one half of the expert-managers were prepared to become leaseholders and are planning to convert their enterprises over to lease operations.

In which spheres of activity do leasing enterprises enjoy the most freedom? The overwhelming majority of the leaseholders realized such freedom in the distribution of cost accounting income, in determining the earnings amounts and in utilizing the fund for the development of science and engineering and the social development fund. It is significant that only one third of the leaseholders sensed a strengthening of their independence in defining the future prospects for their production programs. The remaining leaseholders were inhibited in this regard by the high proportion for the state order.

Beyond any doubt, leaseholders require a definite amount of skilled assistance from their higher organizations and by no means is this assistance always being made available to them. Thus the chief task—that of accelerating technical progress, which initially justified the formation and existence of ministries—is being carried out in a very inadequate manner in the opinion of the leaseholders. In my opinion, this serves to underscore the crisis in the branch system of administration. Instead of the present and no longer needed main administrations, the leaders of leasing enterprises are proposing the creation of cost accounting firms for the introduction of scientific-technical achievements and, in particular, for the development and introduction of specific plans for the enterprises. And the enterprises are prepared to pay a greater amount for this than is presently being expended for maintenance of the higher organization. The higher organization is coping poorly with logistical supply and marketing and only somewhat better with the organization of personnel training and retraining.

The independence of leasing enterprises is largely dependent upon the length of the lease. Five of every ten

enterprises studied concluded agreements for 8 years, two—for 3 years, two—for 1 year and one enterprise—for 6 months. The leaseholders are under the impression that the leaders of the higher organization are striving to shorten the length of the lease. The partial revival of lease relationships is making it possible for a main administration to maintain its authority over an enterprise. In addition, this compensates somewhat for its incompetence in determining the lease payments. In connection with the revival of lease relationships, it strives to include higher payments in the agreement, based upon the true results realized by the enterprise. Here again we encounter the notorious practice of "based upon that which has already been achieved," which tends to emasculate the very essence of a lease.

In my opinion, the length of a lease must depend upon the actual reproduction processes and particularly upon the period for the replacement of the active portion of the fixed capital. It can be a multiple of a five-year period (5, 10, 15) and yet this is not mandatory. In the "Principal Methodological Statutes Governing Leases," mention is made of a period of 8-15 years. But if the length of a lease goes beyond our planned 5-year period and if in the process the enterprise is guided in its operations by agreements concluded earlier in conformity with the demand for its products, the state order or fixed lease payments, then five-year planning loses its original meaning.

But the difficulties of management under the new conditions do not stop here. What else is inhibiting operations in particular? The absence of wholesale trade and funded distribution of the means of production (according to 70 percent of the leaseholders and 67 percent of the managers), lack of continuity between the new managerial conditions on the one hand and existing practice and instructions on the other (50 and 67 percent), high proportion for the state order and the dependence of enterprises upon the higher organizations in determining the production programs (50 and 75 percent), a high percentage of budgetary withholdings for the higher organization (30 and 75 percent) and the absence of a legal operational status for the enterprises under the new conditions (20 and 17 percent). The total amount of responses was greater than 100 percent, since the experts cited several difficulties.

A stumbling block along the path leading to further dissemination of the economic reform, judging by the almost unanimous responses of the two groups of experts, is funded distribution and the absence of wholesale trade in the means of production.

The study revealed difficulties in implementing the reform along several lines. The responses of the expert-leaseholders and managers were rather close to one another. Attention was drawn only to the substantial difference (30 and 75 percent) in evaluating the high percentage of budgetary withholdings for the higher organization. In my opinion, such a difference is explained by the very nature of a lease, in which the

agreement eliminates the possibility of a ministry or main administration laying claim to higher fixed payments for the increasing income of the enterprises. In this manner the leasing enterprises are "bought off." At the same time, the very form of this management creates conditions for encroachment by a higher organization on the income of an enterprise.

Many expert managers cited the high proportion for state orders as an obstacle in the path of work being carried out in accordance with the new conditions. This factor was pointed out by only one half of the leaseholders. In my opinion, the contractual relationships between leasing enterprises and a higher organ restrict substantially the opportunities of the latter to maneuver on the basis of a state order. In a high proportion of the state order, the leaseholders see considerably less danger than do the managers.

Thus, not all of the expectations of the labor collectives which converted over to the new managerial forms have as yet been justified. Old factors are inhibiting the operations. A need exists for reevaluating the role of planning, for abolishing the branch system of administration in its present form, for reorganizing the system of logistical supply, for introducing wholesale trade in the means of production and for radically changing the system of price formation. This constitutes a cluster of problems. If we do not accomplish all of the above and are limited only by an enterprise's level, then the progressive lease relationships will hardly change the economic situation.

In summarizing the results of the interrogation, I would like to state that the leaders on the whole placed a higher value on a lease than on either of the cost accounting models, notwithstanding the many still unresolved overall problems of our functioning economy.

A popular question: can an enterprise which is operating independently not turn the entire increase in cost accounting into wages without "consuming" its own resources? In order to avoid this, a normative ratio is established for an increase in wages and labor productivity (cost accounting income). I am convinced that this is a far-fetched requirement. A leasing enterprise, guided by long term economic interests, is capable of ensuring an optimum distribution for its cost accounting income. This ratio can only be established mechanically from above based upon the past situation. Moreover, importance is attached not to the ratio between the increases and wages and labor productivity, but rather to the absolute volumes of goods and paid services for each ruble of increase in wages. Here the ratios between the increases in labor productivity and wages can only obscure the real processes.

How can the lease payments be justified? In my opinion, they underscore the ownership of state property for a labor collective. And thus the payment amounts must be established as a result of bargaining between a leaseholder and a lessor. And here there is no place for norms

released from on high. Amortization deductions cannot be included in lease payments as proposed by P.G. Bunich. They are vitally needed by an enterprise for ensuring the simple reproduction of fixed capital. The deprivation of an enterprise of such an important source for development is not justified. Who then would wish to convert over to a lease?

Nevertheless, the establishment of lease payments as price formation becomes regulated will in my opinion depend upon the overall conditions for taxing the profits of enterprises. Each ruble of profit, regardless of the branch in which it was obtained, must be taxed according to a general rate. Any deviations from it must be justified. The lease payment amounts will then be separated from the taxation conditions for profits. In the final analysis, a lease payment assumes the character of a tax on the income of leasing enterprises and it reflects the degree of participation by an enterprise in the formation of the state budget. But even in this instance a differentiation in the lease payments is not excluded provided it is associated with the rent relationships. The lease payments can then partially represent payments of a rental nature.

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## INVESTMENT, PRICES, BUDGET, FINANCE

### Technology Lags Continue Despite Retooling Investment

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[Article by Yu. Rytov: "Construction of Reconstruction"]

[Text] USSR Goskomstat has prepared a report on the reconstructed structure of capital investment. It notes that the scale of technical retooling and reconstruction of existing production significantly increased during the 12th five-year plan. During 1986-1988, 136.5 billion rubles of capital investments were used for these purposes. The average annual growth rate is 2.5 times greater than during the 11th five-year plan. Expenditures increased by 10.1 percent and totaled 49.5 billion rubles during the last year alone.

What a number of large-scale tasks we have to simultaneously solve! We all very well know, in particular: one of the major routes for the nation's financial recovery and comprehensive saturation of the market with goods and services consists of a social re-orientation of the economy. Finally we are attempting to break the "self-moving" nature of our economy when Group A reconstructed itself, and access to the end product—consumer goods and services—practically did not increase.

We need to face the facts: It is impossible to carry out the social re-orientation of the national economy only through decrees "from above" or through centralized reallocation of capital investments, material resources, or monetary assets.

Let us take a very simple example. Let us assume that, having reallocated assets, we decide to double the output of refrigerators. What do we need to do this? Of course, we need equipment, and, of course, refrigerating assemblies, plastic, metal, fittings, etc. And, of course, electrical energy—both for producing them and for power. And it is understood: if the technological basis and the technology of the processes are mainly mixed and attendant production remains at its former level, an avalanche-shaped increase in demand will occur on all types of material resources. It is precisely extreme technological backwardness both in production itself and in the finished product that determines the cost nature of our economy. That is also why structural advances in the national economy have their limits under present conditions. Without scientific and technological progress in all of its sectors, and without reduction of the material and energy consumption of production, as before we are doomed to extensive development which we just do not have the assets for now. A paradoxical situation has taken shape: an orientation toward accelerating output of consumer goods and strengthening the social sphere once again leads to unrestrained growth of the raw materials sectors which assign the main share of resources to themselves.

It has become very important to sort this out even in the very "construction" of reconstruction and to assess its qualitative parameters. Unfortunately, the USSR Goskomstat report is not nearly evidence that such "construction" is distinguished by its simplicity or perfection.

Analysis has shown: in many instances, physically worn out equipment is being replaced by new equipment but it is at approximately the same technological level as the old equipment. Those same types of tools that are noted for their low degree of mechanization and low accuracy of performed operations remain the foundation of the metal-cutting machine tool depot, in particular. The relative significance of progressive equipment in the entire metal-cutting machine tool depot at the end of 1988 totaled: automatic and semi-automatic lathes—5.8 percent (1985—5.7 percent), lathes with ChPU [digital program control]—3.7 percent (2.6), processing centers—0.4 percent (0.3). Furthermore, according to data from an inventory conducted a little over two years ago, already at that time approximately half of the metal-cutting machine tools did not meet modern requirements and were subject to replacement!

The situation is being worsened by the disruption of the program underway for facilities of the machine building complex. Only 22 were commissioned in 1986-1988 instead of the 35 which were planned...

And is it conceivable that we can manufacture modern equipment for reconstructing both our own and other complexes on an obsolete base? Of course not. A natural finale: we have still not succeeded in improving the "age characteristics" of the active portion of fixed assets in industry. During the last year, as also during 1985, a third of the equipment depot was over ten years old. And more than 11 percent had exceeded a 20-year service life.

I remember: now the amortization allowance norms on renovating machines and equipment in industry totals 7-8 percent. This assumes a 13.9 year average service life. And in actuality? It totals 26.7 years which exceeds the norm by a factor of two...

Hence there is yet another deplorable consequence. Expenditures for major overhauls continue to increase. During the last year in industry, they reached 11.3 billion rubles (17 percent increase in comparison with 1985). This is more than one third of total capital investments on equipment retooling and reconstruction of industrial branches. Can we recognize such expenditures as productive? Not at all.

Thus, equipment retooling of industry is such an urgent requirement for our modern economy as well as for its social re-orientation. And it would seem that the decisive word here henceforth belongs to the workers collectives themselves. Now they have the capability to finance expenditures on reconstruction from their own assets. But where can they obtain equipment? How do they conclude contracts with the builders?

In 1988, enterprises expended 34.8 billion rubles on retooling. This is 11.3 percent of the planned amount. A lot? Well no, little. Here is that same case when high percentages obscured the essence of the matter. And precisely because the plans themselves were obviously reduced. No one wants to take a risk. Everyone knows that new equipment is shipped first of all to outfit what is being built and not for reconstructing facilities.

Well, but if the enterprise nevertheless succeeds in purchasing it... It will once again not go to replace old equipment but will be installed alongside it: "It does not hurt to keep extra on hand." In 1988 as a whole throughout the national economy, the total resources expended for equipment installed to replace worn out equipment totaled only 40 percent of capital investment in equipment purchased for reconstruction. And in the ministries' machine building complex it was a total of 20 percent. As we can see, we are still very far from active intensification of production.

What is the solution? The answer is simple. There is still one "whale" on which restructuring of the economy will be supported along with social re-orientation of the national economy and its retooling. Of course, this is further energetic economic reform measures. Only a sound market of production assets will untie the workers collectives hands for broad reconstruction of production and will allow us to conduct its construction which is favorable for both the enterprise and the consumer.

### New Approach to Investment Policy Urged

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No 8, Aug 89 (signed to press 21 Jul 89) pp 58-66

[Article by T. Khachaturov, academician: "Restructuring of the Investment Process"]

[Text] The transformation of the economy, the industrialization of the country, the creation of numerous enterprises and the development of scientific and cultural centers—all of these reflect great achievements by the Soviet people, in which a big role was played by capital building. To a large degree the future of our economic and cultural development depends on this. It is for this reason that the problems of building were discussed at the Congress of People's Deputies and at meetings of both chambers of the USSR Supreme Soviet; these are formulated in the Congress Resolution, "On the Basic Directions of Domestic and Foreign USSR Policy."

It is very important to more quickly eliminate considerable shortcomings in the investment process. Their persistence is a result to a considerable degree of the administrative-command method of management and of the non-comprehensive, departmental approach. The result of this kind of approach is the fact that measures are not taken to eliminate disproportions within the investment process since they do not contradict the interests of the specific department even though they result in negative consequences in other spheres of the national economy. Of no little significance is the fact that the basic portion of capital investments is implemented centrally using national assets which are provided free of charge, without interest. Let us remember that in capitalist countries investment assets are seen as borrowed, i.e., received in the form of credit. Even in cases in which they belong to the enterprise itself, in all accounting records interest is calculated for the specific period the assets are used. The free provision of assets results in a struggle to tear them away from the government in one way or another. As a result the possibility of profitable operations increases.

At the same time the problem of increasing the effectiveness of capital investments is not being posed acutely. To a large extent this has to do with the time frame needed to receive a return on the given investments and with how large the return is. Meanwhile, often objects are built over a very long period of time, as a result of which the return on the investment is very low. If one has to wait too long for a return this means that capital investments are frozen for a long period of time. This is a direct loss for the national economy. In our country the time frame for building an industrial object is 8-9 years, whereas for a similar object in the U.S. or Japan the time frame is 1-2 years.

The low return on capital investments has to do with the fact that an excessively large number of objects using a disproportionate portion of monetary, material and

labor resources are built simultaneously. This is facilitated by the possibility of receiving the needed assets from the higher-standing organization. At the same time, although the determination of the effectiveness of every object is mandatory for its confirmation and although it must be lower than 12 percent, often there is no genuine concern for achieving the effectiveness of the given object after it has been confirmed.

In 1988 total capital investments into the national economy reached 215 billion rubles; of these, 150 billion were allocated for production objects and 65 billion—for non-production objects. In order to characterize the size of these expenditures let us note that last year annual national income equalled 600 billion rubles. Of course, a portion of the capital investments is created by means of the amortization fund, or more precisely, by means of deductions for renovations, if the latter are implemented in the appropriate manner. But the largest portion of investments comes from national income.

The volume of incomplete building, which reached 170 billion rubles in 1988, is very great and is increasing yearly. This characterizes the size of frozen assets that are not yielding a current return.

A large portion of capital investments is being directed into the production of the means of production. This aim was accepted long ago in connection with the task of rapid industrialization and was theoretically justified with dogma about the advantageous growth of the first subdivision of public production. As a result of its forced development the country became first in the world in the production of the basic means of production—steel, fuel, ores, building materials and some other production resources, overtaking the U.S. and Japan in this area. According to data presented by N. I. Ryzhkov at the first session of the USSR Supreme Soviet (1989) over 60 percent of all fixed production capital is concentrated in national economic complexes that produce raw materials. There is a very small proportion of capital in branches that meet the daily needs of the population: light industry—4 percent and food—6 percent. Capital investments are allocated accordingly. The proportion of annual investments into heavy industry during the first 3 years of the current five-year plan were greater by a factor of 8 than investments into light industry and the food industry.

A considerable disproportion affecting the effectiveness of investments is the significant fleet of unused equipment. The USSR occupies first place in the world in the production of metal-cutting machine tools, very many of which remain idle. Several times as many tractors and combines are produced here as in the U.S. Many of them are of a poor quality and are serviceable for an intolerably short period of time or are not utilized at all due to the shortage of tractor operators. There are many examples of industries that do not utilize equipment adequately.

A large proportion of capital investments is used primarily for the needs of the first subdivision. It is as if this subdivision is reproducing itself and exists for this purpose alone, and not for the second subdivision, which produces products for national consumption. Assets are directed into the second subdivision according to the leftover principle.

Capital investments into the development of the first subdivision of public production are used to pay the wages of builders, of industrial workers who produce the equipment, raw materials and fuel, and of the workers of newly-built enterprises. Wages increase their demand for food and consumer goods, but the selection of consumer goods has remained the same as before; only production in the first subdivision has increased. Here we have the negative aspect of preferential growth—within society the disproportion between demand and lagging supply is increasing, inflation is growing and the standard of living is falling. All of this is exacerbated by the fact that the greater the share of the first subdivision the longer the duration of building and assimilation.

Disproportions are manifest especially clearly as a result of capital investments into large investment programs, into so-called "structures of the century," prestigious multi-billion ruble objects requiring especially long terms and the corresponding freezing of enormous assets. Among the objects of recent years that have not provided a timely return we can name the Baykal-Amur trunk line, which is nowhere near completion and which has already swallowed 9 billion rubles of investments, bringing great losses yearly and very little progress. Railroad communications along this new route, as along a series of others (for example, Caucasus pass, Moscow - Minvody) are needed but the priorities for their maintenance evidently require a more thorough national economic foundation and a postponement until later.

The largest investments were made into reclamation, primarily hydraulic engineering, although many expenditures were not effective, which society finally had to realize. In 1975-1988 expenditures equalled 112 billion rubles, but having not brought the promised return they contribute only to satisfying departmental interests.

The use of almost all of the water in Amur-Darye and Syr-Darye for irrigation purposes for the new cotton plantations with the goal of exporting cotton and obtaining foreign currency brought great damage. It seems that it would be better to increase the yield of grain in the country and to stop spending hard currency to import it, than to remove the water from the rivers of the Aral basin. This has resulted in the catastrophic drying out of the Aral Sea, the development of wasteland throughout the region, sand-salt storms and sickness in the population.

The decision to build five petroleum and gas complexes in the Tyumen region jointly with American and Japanese businessmen is fairly disputable. According to calculations, the complexes will cost 90-100 billion rubles

with a consideration of expenditures for the economic assimilation of the territory, the resettlement of workers and the building of transportation networks and of the entire infrastructure. But there is no overall foundation for this gigantic, expensive project as of yet.

These examples of enormous "prestigious" projects, about which decisions were made before the technical-economic foundation was developed, confirm the idea presented above that disproportions in capital building and the lack of correspondence between the intended volume and existing assets exist. As a result long building periods, low effectiveness in building, enormous over-expenditures as compared to the estimates and plans, inflation and the deterioration of the general economic situation within the country are unavoidable.

In addition to the aforementioned there are also other disproportions that also affect the course of capital building and that exacerbate its shortcomings. This includes disproportions between production capacities and labor resources. The large number of unoccupied jobs in the national economy is one of the indicators of excessive realization of capital investments.

With the multi-billion capital investments in "prestige" objects, investments in the renewal and replacement of worn-out fixed production capital are completely inadequate. In 1987 only 2.6 percent of worn-out capital was removed from industry. This means that a complete replacement of fixed capital requires over 38 years. As N. I. Ryzhkov noted at a joint meeting of both chambers of the USSR Supreme Soviet of 7 June 1989, of 1.9 trillion rubles of fixed production capital 40 percent is worn out. This kind of obsolescence is reflected negatively in the effectiveness of public production and requires considerable capital investments for renewal.

Disproportions also have an effect in that a significant portion of equipment bought abroad remains idle, as does that delivered from domestic plants. The cost of imported equipment that is not delivered on schedule is valued at 10 billion dollars. It is essential to eliminate the reasons for this idleness and the losses related to it.

Not only the long duration of building but also its low quality, incomplete work, fraud and so on decrease the effectiveness of capital investments. All of this results in an intolerably long period for the assimilation of production capacities that have already been approved. It consists of 2-3 years and more. This is the result of incomplete work in the object itself, and of lags in building housing, hospitals, cultural facilities and so on. In developed capitalist countries usually no special schedules for the assimilation of the objects submitted for operation are planned; completed objects begin operations without delays.

We need a radical improvement in capital building. This requires balance of the entire investment process in the national economy. We must have building programs that correspond fully to the possibilities for implementing them, to the capacities of building organizations, and to

the availability of materials and equipment. This will enable us to achieve normative building schedules, to avoid overexpenditures as compared to estimates, and to improve the quality of building work.

There can be no normal building if as a result of the excessive number of objects each receives 2-3 times less material, equipment or manpower than needed. These are the reasons for "long-term building." In order to decrease the duration of building to existing norms and to decrease "incomplete structures" it is essential to curtail the work front to a level that will provide financial and material supplies within the normative period. We must decisively eliminate the resistance of various departments-customers who will use any method to receive free financing and assets from other centralized sources. Unfortunately, in part builders themselves are interested in the growth of the number of objects being erected simultaneously—it is easier to provide themselves with work, to delay the fulfillment of unadvantageous procedures (finishing and other) and to transfer to more advantageous jobs in which they can utilize mechanization to a larger degree.

The curtailment in the volume of building in and of itself is unavoidable under conditions of self-financing. The proportion of investments from the enterprise's own assets in total state capital investments, which in 1986 comprised only 3.1 percent, increased to 28 percent already in 1987 and to 39 percent in 1988. Under these conditions it is completely possible to refuse budget financing to those departments and enterprises which, in making the transition to complete cost accounting, continue to strive toward free investments paid for by the national economy. If such assets are provided, they should not be free; interest must be charged. The level of the latter should be established not on an artificially low level, but on an economically adequate level, with a consideration of effectiveness in the national economy as a whole.

It is essential to make a transition to bank credit for capital investments, putting an end to budget financing and retaining it only for some especially important enterprises of national importance, primarily in defense. The number of such enterprises will probably decrease if we keep in mind the conversion being implemented within this industry toward the production of consumer products for the population. Here evidently products should be produced that will enable defense objects, if possible, to preserve production profits at the previous level or at a level close to it.

With the transition to self-financing we must put an end to the redistribution of assets by ministries, which take them from enterprises that operate efficiently and use them for weaker enterprises. The activities of unprofitable enterprises must be restructured; material resources must be supplied to them. Production must be reorganized and its nature must be altered. Of course, actual

bankruptcy should lead not to the firing of workers but to new organizational forms, as for example those having leasing as their basis.

The transition in building to finalizing accounts with contractors only for completed products, for submissions of objects with key in hand and for the introduction of objects and start-up objects, housing and non-production structures into operation could be of great significance. This would force builders to strive for better work organization, to accelerate building and to improve its quality, and to submit completed objects without delay. There is nothing new in the delivery with key in hand—this was foreseen as long ago as 1969. But financing difficulties, which could have been foreseen, began; building organizations did not have the assets to complete the entire cycle of work prior to presentation to the customer, and for this reason partial accounting became prevalent in the course of building itself.

An improvement in the investment process and in economic development in general depends to a large extent on management. In planning future building managers should not tolerate gigantomania and the erection of enormous, expensive and wasteful objects which require extensive time frames before they will yield a return. We must end with the departmental, branch approach to capital investments that is at the basis of this gigantomania and replace it with national economic complexes that increase the effectiveness of public production.

One of the ways to deal with this task is to intensify the economy, to more fully utilize existing production assets and to curtail new building correspondingly. The need for corresponding changes in the structure of public production was recognized long ago; the tendency toward a better use of capacities of existing enterprises is being implemented, although inadequately.

In 1980-1988 the following changes took place within the structure of government capital investments into production objects. In 1988 44.7 percent of investments were directed into technical renovation and reconstruction as compared to 38.7 percent in 1985 and 33 percent in 1980; into new construction—35 percent as compared to 36.5 and 38 percent respectively; and into expanding existing enterprises—18.4, 23.6 and 29 percent. In this way, the proportion of extensive investments is being curtailed but it is still large; in 1988 it equalled over half of all assets. Practical experience shows that to increase the volume of production or the introduction of new techniques departments move toward new building more willingly than toward renovating existing capacities. Often one hears that this kind of renovation is more expensive than new building or expansion, especially if it is necessary to maintain uninterrupted production. It is also difficult to find contract workers for this kind of work because new building is more advantageous for them since it allows them to spread out in the allotted area. The customer is forced to use a less effective economic means of building. Under such conditions we

must create special building organizations for the technical renovation of existing enterprises.

At the same time we know that production intensification based on new effective technologies and on a more economic utilization of all assets enables us to save tens of billions of rubles in capital investments with our scale of production. Better use of existing resources requires fewer expenditures than the primary extraction of raw materials and fuel. The processing of secondary raw materials is sometimes less expensive as compared to primary. In this there are great possibilities for making investments more efficient, especially in capital-intensive branches.

An important question involves curtailing the loss of building materials, cement, tile, glass, sanitation-technical and technological equipment and other items. Essentially, there is no economic or administrative responsibility for increased expenditures of these items. It is not difficult to realize this, if only in the quantity of various materials remaining at the building site after the object is submitted. Evidently, the responsibility for preserving them must become real, one that will avoid losses. Of considerable significance is the creation of the necessary infrastructure, storehouses and other storage facilities, and approaches to building sites, which are often ignored out of a false sense of economy.

Within the shortest time possible we must reexamine all ongoing and new constructions, reorient or preserve a significant portion of them, and turn away from many previously-accepted decisions with regard to objects that stretch us beyond our limits. It is completely intolerable to include new building projects in the plan or to begin building before an overall and thorough development of a technical-economic basis is implemented. Unfortunately, this kind of thing happens often. The decision maker evidently considers himself to be the most competent.

Ecological considerations must be kept in mind when developing technical-economic foundations. For a number of years questions involving natural conservation were hardly given any attention since they were based on tendencies to develop production at any price. This resulted in the premature exhaustion of coal mines in the Donbass, of ore treasures in Magnitnaya Mountain and of the coniferous forests of the Northwest, in the extreme pollution of the Volga, which has been transformed into a number of stagnant reservoirs that have flooded fertile land and in the decrease in fertility of chernozems—the national riches of our country.

It has long been time to solve the problems of capital building in close conjunction with the formulation of economic problems, the creation of economic incentives to avoid pollution and the use of modern technology for these purposes. We cannot limit ourselves to catching and detoxifying wastes or to a concern not to exceed the allowed limits of concentrations of toxic substances. It is

essential to have strict adherence to a world-wide economizing on natural resources. The solution to problems dealing with the protection and efficient use of natural resources must be facilitated by the establishment of prices for land, minerals, water and so forth. Accounts dealing with differential rents and other comparisons that bring out the economic role of the given resources in developing public production can lie at the foundation of assessments. This can and must contribute to the curtailment, and in the future to the complete cessation, of exports of raw materials and fuel abroad. Today the hard foreign currency obtained covers expenditures for the import of grain, meat and other agricultural products which we ourselves are obliged to produce in a sufficient quantity.

The time has come for mandatory expert opinions from outside departments regarding building and many other objects from the point of view of ecological aspects of technology, the integrated nature of use of raw materials, the closed nature of technological cycles and the expediency of export. We must widely include the public and republic, oblast and local organs in making decisions about whether or not to approve a particular object. It is very important to consider the entire complex of national economic and social tasks and possibilities for realizing them.

One of the main problems in the restructuring of capital building is the creation of a counter-expenditure economic mechanism in the investment sphere. It must be oriented not at the "assimilation" of expenditures (the costlier, the better) but at completing high-quality production building at the smallest cost possible. As a result there will be a decrease in the materials-intensity of building, and labor productivity will increase.

We must reexamine some obsolete concepts concerning the effectiveness of various forms of construction and articles, particularly prefabricated ferroconcrete designs, the output of which increased from 85 million cubic meters in 1970 to 153 million cubic meters in 1988. The fact is that in past years a powerful base has been created for its production and no one wants to abandon it. Meanwhile, 1 cubic meter of sectional ferroconcrete costs more than double that of simple ferroconcrete. But when sectional ferroconcrete is used output per worker appears to be so much more and this means that gross production is greater, which is advantageous to the building organization. In sectional ferroconcrete plants considerable expenditures are related to the growth in metals intensity and additional technological operations, which once again results in higher volumes of "assimilated" expenditures. This is advantageous for the branch but not for the national economy. Consequently, it is essential to more extensively utilize simple concrete, multi-layer slabs, light metal designs, asbestos-cement panels, designs and items made from aluminum alloys and other progressive materials.

In the course of capital building we must significantly accelerate the realization of the most important social

and economic goals. The goal of providing an apartment for every family by the year 2000 will require great intensity from the national economy, and first and foremost from building. About 36 million apartments must be built. Meanwhile, for example in 1988 only about 2.5 million were submitted. Building volume must be increased considerably. Already during the 13th Five-Year Plan we must assure the introduction of 850 million square meters of housing as compared with 650 million square meters during the current five-year plan. During the 14th Five-Year Plan this must be increased to 1,000-1,100 square meters. For this it will be necessary to increase not only the capacities of building organizations but also the volume of materials, sanitation-technical and other equipment. Social tasks in the area of building in cities are not limited to this by far. It is essential to introduce new buildings and schools, to renovate existing building and schools, and to equip and expand hospitals, birthing clinics and other health facilities.

The volume of building is very significant for solving social problems in rural areas. A large portion of the village housing fund is in the hands personally of citizens. In 1980-1987 it increased by only 6.2 percent as compared to an increase of 51.2 percent in the government and public housing fund and the fund of housing-building cooperatives. One-third of housing is built using government capital investments. A significant portion of the village population does not have plumbing, sewage or other conveniences. Many village roads are unpaved and only kolkhoz and sovkhos centers are connected to public networks. The condition of schools and hospitals is inadequate; many village children must walk several kilometers to school. There is a shortage of teachers; they often must teach two or more subjects, and they are often not supplied with housing. Often children do not have the opportunity to study a foreign language.

The ill are also often forced to travel considerable distances from their homes to medical facilities. We should not console ourselves with the contrived "lack of prospects" for the village. Here we have the consequences of the destruction of the peasant in the country, which resulted in the ruin of agriculture and in the food crisis.

In order to rejuvenate agriculture and to make the peasant a master we must raise his standard of living and end the eternal lags of the village behind the city. This can be achieved by means of the development of building in the village—housing, socio-cultural, transportation. Housing with all the modern amenities, schools and other learning institutions, well-equipped libraries, clubs, movie theaters as well as hospitals and other medical facilities are needed. We must create production conditions that will help the peasant to improve agriculture. We are speaking also about allotting land to him—not abandoned, unused and inconvenient plots but fertile acreage, and about supplying machinery, fertilizers at accessible prices and building materials for carrying out the necessary work in an economic manner.

In addition to this we must provide storehouses, refrigerated facilities, roads, communications objects, administrative and public buildings and so forth. The agricultural sphere must become a no less important branch of building that industry or the city.

We must pose the question of building for recreation purposes, for the relaxation of workers especially. The country needs new resort centers, sanatoriums, houses of rest and tourist bases. All of this will facilitate the strengthening of the population's health, the lengthening of time an individual can work, and longevity. Expenditures for recreational building will pay for themselves economically through increased labor productivity, the effectiveness of the national economy and a growth in the nation's well-being.

The efficient decrease in volume of building work is an important prerequisite for the health of the economy. A large role in this is played by local soviets, which, in developing the regional economy, are called upon to watch over its internal balance.

We must increase the role of commodity-monetary relations in the investment sphere. We must create a market of capital investments, create possibilities for realizing them on the basis of contract agreements between participants in the investment process. Products from investment activities, including housing and objects in the non-production sphere, must become objects for purchase and sale and not for free distribution. In order to accelerate the solution of the housing, food and recreational problems we should in every way possible develop the building of houses for sale to the population.

When developing and introducing a system of contract relations special attention should be given to adhering to the estimated cost of building. The contract agreement should not allow for an irresponsible reexamination of estimates with the goal of increasing them, of exceeding the estimated costs of building confirmed in the title list of the five-year plan.

In struggling with increased prices for building production we must strengthen the role of price limitations. During the transitional period of economic reform the significance of government control of prices must increase. In addition to the correct determination of increased prices for highly efficient equipment it is important to focus attention on price reductions for obsolete technology.

As the shortage in building capacities and equipment is eliminated, contract prices for building products must take their place. When determining contract prices the customer should have the right to provide incentives for the contractor to shorten the time needed to complete the object.

The purchasing power of the investment ruble is falling constantly not only due to the increased cost of equipment and of the square meter of area introduced but also as a result of increased prices for planned production.

Controls over costs of planned work will encourage agreements on the contract price between the planning institute and the customer. Improving price structure for planning work and a consideration of its effectiveness can provide more interest on the part of planning organizations to improve the quality and effectiveness of projects. It will create conditions for developing cost accounting in planning organizations.

It is essential to correctly organize interrelations between planning organizations and technological and machine-building institutes. Today planning organizations are afraid of risk in using the latest techniques and technology in planning; they prefer the tried and true, which will unavoidably result in obsolescence. Design and research organization must without delay propose new technologies and equipment designs to planners so that the latter can utilize them in their leading plans.

The restructuring of capital building requires the determination of the effectiveness of capital investments in the aforementioned objects, the comparison of expenditures and possible effectiveness in the form of growth in national income, clear production and profits. The time frame within which this is achieved, the return on investments and making sure investments do not exceed the norm should also be considered.

But even if all of these accounts are implemented carefully and accurately, the resulting conclusions concerning the effectiveness of the examined investment is still inadequate for making a decision about building. After all, other objects and other variants of capital investments exist. We must have data for all possible variants before we begin work on an object in order to select the most effective and preferable. At the same time we should postpone to the future objects which for various reasons (size of expenditures and duration of building, the material base) are less effective, although each of those that are postponed, taken individually, could be realized. All of this speaks of the very great importance of an overall foundation for planned construction objects and of the strict selection of the best variants with the achievement of proportion between the volume of planned building and the possibilities within the national economy.

Perestroika requires radical changes in capital building, in the entire investment process, beginning with the scientifically-based concept of economic development, with achieving proportion between its possibilities and the demands of further growth of its material base. We must sharply curtail the building schedule, decrease the cost of building and improve quality. Increased efficiency in all of capital building is needed to solve the economic and social problems facing the country and to satisfy the material and cultural needs of the people.

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## Lithuanian Commercial Bank Founded

### Advantages Cited

18200454 Vilnius SOVETSKAYA LITVA in Russian  
14 Jul 89 p 1

[Interview with I. N. Bogdanovich, manager, and A.A. Mishakov, president by V. Skripov: "Commerce on Shares"; place and date not specified; first paragraph is SOVETSKAYA LITVA introduction]

[Text] The structure of management in the republic in all its spheres is swiftly changing today. Innovations are born almost daily. Among the newly born is one of the first commercial banks in Lithuania. Novovilnyanskiy Rayon became its home; its place of residence for the time being is the building of the rayon branch of the USSR Agrobank. Not long ago, the new bank was officially registered in the Ministry of Finance and the USSR Gosbank, which confirmed its statute, and obtained the status of a juridical person. At a meeting of the shareholders, its executives were elected: manager—Irina Nikolayevna Bogdanovich and president—Aleksey Alekseyevich Mishakov. Our interview is with them.

[Correspondent] I will begin with a traditional question: How was the idea of a regional commercial bank born?

[A. Mishakov] The process which is taking place today in the management of the republic's economy can be characterized in brief as integration on the basis of khozraschet. The general trend of its development is gravitating toward the creation of associative associations on the territorial basis, which would make it possible to direct the efforts of the various enterprises, organizations and individual citizens toward the solution of joint problems and toward assistance and cooperation in the struggle against departmental bureaucratic dictate. And the creation of the commercial bank is next in this.

The existing state banking system in many respects does not satisfy the managers, and I should add that, after the reform and the appearance of specialized banks, the inconveniences even increased. accounting became even more difficult, the banking apparatus became still more cumbersome, and there was a slowing down of the operations with respect to settling and crediting. This is why among the managers of a number of industrial enterprises, kolkhozes and sovkhoses, which had at their disposal significant spare cash resources (in one Vilnyuskiy Rayon in a village there are about 40 million rubles in profits), the idea of the creation of their own bank on share principles gradually ripened.

This idea was actively supported by the Novovilnyanskiy and Vilnyusskiy party raykoms, who saw in it a good method to accumulate funds for the solution of various social and economic problems of the region. The simplest example: In our republic, individual construction, which had hardly been born, came to a standstill—the banks did not grant credits. If one has one's own commercial bank, this question can be quickly removed.

With the help of this bank, we can easily transfer the funds of one enterprise to help another, finance large mutually advantageous projects, attracting, if necessary, the credits of other banks, with which it will be possible to set going partnership relations, and a great deal more.

[Correspondent] Your bank is called commercial. Explain to the readers, what is this?

[Mishakov] This means that the basic function of the bank is the transmission of credit funds—this most important lever of economic management. The money turnover of our bank will be formed from different sources. Above all, these are the bank's own funds formed from the deposits of the shareholders (the so-called share capital). We have about 20 shareholders today (enterprises, kolkhozes, and cooperatives), who set the share capital at 5 million rubles. It goes without saying, the sum of this capital will change with the expansion of the number of shareholders. In addition, the bank will attract the funds of clients, which are in its accounts, the deposits of citizens, as well as loans from other banks. And finally profit, which we are counting on receiving in the course of the banking operations. Through these sources we hope to accumulate and put into circulation a large mass of money, with the help of which a diverse economic policy can be implemented. Including such operations as the acquisition and transmission, to enterprises and organizations on lease conditions, of equipment, means of transportation, etc. (leasing), the crediting and clearing of enterprises connected with foreign trade activity, etc. Yes, we are also planning to make arrangements to issue our own shares.

[Correspondent] But what are the advantages of your bank over the Agrobank, the Promstroybank, etc.?

[Mishakov] Independence and general interest in the use of financial means! Money is the lifeblood of the economy, and of principal significance is the question of who disposes of it and how. In our bank all questions are decided on a democratic basis—by the council and the general meetings of the shareholders. The posts of both the manager and the president of the bank are elected and accountable posts. This is one aspect.

The other aspect or advantage lies in the fact that the status of an independent khozraschet institution gives us the possibility of leaving at our disposal a much greater part of our income than remains of it in a specialized bank. There it almost entirely goes into the budget and for the support of the higher apparatus. We will assign only 35 percent to the budget and maintain a small internal apparatus (approximately 45 people). Last year, for example, the Novovilnyaskie branches of Agrobank and Promstroybank had incomes of almost 1.5 million rubles, but it [as published] did not even see them: everything was spent through various channels of tax deductions. These incomes we can use for social needs, for the formation of the bank reserve, for the payment of dividends to the shareholders, etc.

[Correspondent] The appearance of your bank, obviously, will introduce a certain dissonance into the banking system that has taken shape. How are your banker colleagues reacting?

[I. Bogdanovich] They are reacting, to put it mildly, cheerlessly. This is understandable; you see, we are creating a competition and we are winning clients from them. Incidentally, making use of the opportunity, I would like to explain to our present and potential depositors that, if an organization comes over to us for service, and for this it does not have to be a shareholder, Gosbank must transfer its credit resource to us. As far as the assessment of the situation is concerned, I suggest that it will inject a positive aspect into the banking business—it undermines monopolism and impels banks to fight for clients. And this it can attain only through increasing the level of its work.

[Correspondent] And the last question: Your bank is a khozraschet bank. In the statute of the commercial bank it is written: "The shareholders bear responsibility for the debts of the bank. . . . The state does not bear responsibility for the obligations of the bank. Are you not afraid that you will go bankrupt?"

[Mishakov] Every genuinely economic activity and commerce carry an element of risk. It is only among ignorant people that the figure of the financier is associated with the dismal appearance of the bureaucrat-bookkeeper. In actuality, commercial work is a constant creative search, enterprise, if you will, art. I don't think that things will be easy for us. For sure, we will have to cope with the resistance of banking organs, and no one is insured against his own mistakes. We will try to overcome the obstacles and to make fewer mistakes of our own. Moreover, we have a collective mind in our bank; on every question we will hold council. Not for nothing do they say: one mind is good, but ten are better.

### Credit Policy Questioned

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9 Aug 89 p 1

[Article by Ch. Matsulevich, deputy chairman of the board of directors, chief of the Planning and Economic Administration of the Lithuanian Republic Agro-Industrial Bank: "The Choice of a Bank: What Stands Behind It"]

[Text] In SOVETSKAYA LITVA of 14 July an interview was published which was given to your correspondent by the directors of the commercial bank in Novo-Vilna, I. Bogdanovich and A. Mishakov, who were elected to their posts by the shareholders of this new institution. To my way of thinking, a whole series of propositions expressed by them through the newspaper calls forth serious objections. Moreover, in general it is clear what motivated these officials to advertise their bank. It is a bad thing, however, that they are doing this by trying to cast aspersions on the existing banking system and its employees.

The general key of the article sounded approximately like this: only our commercial bank will secure advantageous financing for your large projects! Join our bank, get financing only in it!

But is this so? The pluralism now being viewed in the perspective of the development of the banking system is good in that it grants state and cooperative enterprises and organizations the right of free choice of the bank for their credit and settlement services. In principle, the very radicalism of the economic reform in many respects is determined by this democratic nature of choice.

The counterposition of the commercial to the state bank, which clearly shows through in the position of the authors, is unsound. The point is that the commercial status does not at all transfer the bank into conditions of some kind of absolute "freedom" in its operations. Even the "classical" commercial banks in the United States have no such freedom. Incidentally, in the commentaries on this question by the deputy chairman of the board of directors of the USSR Gosbank, V. Zakharov, published in the journal *DENGI I KREDIT*, No 6, 1989, it is also stated that the Gosbank requirements in the sphere of money circulation, calculations, and control over the issue of funds for the payment of wages are obligatory for all banks.

In the interpretation of Bogdanovich and Mishakov, the status of the commercial bank is made to look so that some directors of enterprises, institutions, kolkhozes and sovkhozes can see in it a distinctive panacea, capable of solving the problems whose essence rests on some restrictions and control functions on the part of the state banks.

The assertion made by the directors of the new commercial bank with respect to their possibilities to quickly solve the question of financing individual construction does not correspond to reality. The regulation for financing the consumer needs of the population are simply necessary in view of the imbalance of its cash incomes and expenditures. For this reason, such a prerogative is reserved for the Savings Bank. You see, there is credit not on the basis of someone's whim specifically, but because today there is a significant surplus of money—by comparison with the possibilities of economic turnover. Credit expansion in the consumer sphere of the type proposed by the authors of the interview can only give rise to additional issue and intensify the inflationary situation. There is not a singly sober-minded and sufficiently far-sighted banker who will bring himself to such a thing.

In general, if we return to the methods of advertising for the commercial bank by its directors, their position seems at least non-progressive. To count on the fact that their bank will replace the branch of the Agroprombank in the rayon is simply undemocratic: you see, one monopoly would be replaced by another. And what would then remain of the right of choosing "their own" bank granted to consumers?

To strengthen their positions, the directors of the new bank also decide on statements of dubious quality, not to say more. For example, assertions are heard, according to which the Agro-Industrial Bank... is closing on its own initiative. That the normative rules of the state banks are so severe that they do not allow either the extension of credit for wages, or assistance with funds through mutual crediting of consumers with the mediation of the bank.

In actual fact, everything is not so. Without exception, all the "innovations" of the commercial bank cited in the interview as being characteristic only of it are now being successfully realized in practice by the state banks. If this was not done in Novo-Vilna, then only for the purpose of compromising the Agro-Industrial Bank. Its manager was... I. Bogdanovich.

Not for the sake of "patriotism," but for sake of the truth I must state that the first steps of the commercial bank in Novo-Vilna are characterized by open pressure on the clientele with crazy promises having no limits. Right up to explanations to clients, according to which the credit resources are automatically transferred from the special bank to the commercial bank if it so desires. Meanwhile, in the same commentary of V. Zakharov, about which I have already spoken, it is unambiguously communicated that an economic organ, when selecting another bank (not necessarily a commercial bank), must make full settlement of the previous debts it has there.

I do not want to be understood as though I am trying to treat alike the state and commercial banks. Their functions, rights, and obligations differ, of course. One of the basic such differences consists in the fact that the commercial bank itself determines the price for its commodity—money, freely sells and buys this commodity. The strength of the commercial as well as the state bank is determined by how much it was able to attract in the way of resources, the main part of which consists of temporarily free monetary assets of economic organs—shareholders and how successfully it invested them in the form of credit. In the case of insufficient means of its own, it can attract the centralized funds of Gosbank or the resources of other banks—on conditions of having to pay for them.

For the consumer, the selection of a bank depends not last of all on the rate which he has to pay for credits and services. In the Agro-Industrial Bank, these rates up to now, let us say directly, are unjustifiedly low, amounting to 1.47 percent on the average for the republic for credit, for its own resources—0.5 percent, and for centralized resources—1.2 percent. With the cheapness of the state credit, which does not always operate for the good of the economy, is also connected an extremely high demand for it.

The commercial bank sells this commodity—money—at the market price, depending on demand. And the demand for the commodity in short supply that credit has become stirs up the desire to earn a good return on it.

The founders and shareholders are interested in the extraction of the maximum income from the free capital deposited in the bank, which is done through the increase of the interest rate for credit, i. e., in this concrete case—at the expense of the kolkhozes and sovkhozes of Vilnyusskiy Rayon.

People may ask, and what is bad about this? This money is at the disposal of the council of the founder of the bank, so that the money will go for the good of the region. Especially if one takes into account that the deductions into the budget are relatively smaller.

But, first of all, it should not be forgotten that in general the deductions into the state treasury have a double character. There is the direct payment—at the level of 35 percent of the bank's profit. But there are also indirect payments—for the centralized resources. For the commercial bank, it is established somewhere at approximately 5 percent, exceeding the direct payment many times over.

Compare the interest rates for credit in the Agro-Industrial Bank I have already mentioned with those which the commercial bank takes in one way or another. Because of the necessity to secure sufficient profitability of its commodity, these rates there can in no way be lower than 7-8 percent. Although, I do not exclude this at all, in some cases, let us say for purposes of advertising, the commercial bank may sell its credits much cheaper.

Of course, the business cycle that is now taking shape with its high demand for credit makes it possible for the

commercial banks to buy up resources from the rich kolkhozes and sovkhozes which have spare funds at their disposal. But also to direct them into, . . . industry and into cooperative enterprises, since the interest rates there are the highest today. And it is for this reason that there is the danger of a significant pumping over of funds from the agricultural complex to "urban" consumers of credit.

Moreover, it should be clear to anyone that the more spare funds of kolkhozes and sovkhozes and other agricultural enterprises will be involved in the resources of the commercial bank, the fewer funds will remain in the accounts of the state specialized bank. And the same Agro-Industrial Bank, in the presence of the reduction of its own resources, will be compelled to reduce credits, which are scanty as it is. You see, the spiral of interest rates is moving at a steeply accelerated pace; the agrarian sector simply cannot keep up with it.

It seems the farms of the agricultural complex nevertheless must accumulate their own spare capital for their own development. True, to do this in the absence of the necessary capital market, as well as without the establishment (again through the market) of the whole complex of prices, is extremely difficult. Consequently, the question of the implementation of the centralized regulation of interest rates, both for credits and for spare resources, has become urgent. The same for all banks.

Only in equal conditions is healthy, fair competition possible, from which, making use of their right to choose their bank, both credit consumers and its depositors gain.

# AGRO-ECONOMICS, POLICY, ORGANIZATION

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## Progress of Transformation in Agro-economic Establishment

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SELSKOKHOZYAYSTVENNOY AKADEMII in  
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[Article by L.A. Dudoladov and N.F. Roslyakov, Department of Agricultural Economics: "The Problem of Improving the Economic Mechanism for the Conduct of Economic Activity in the Agroindustrial Complex"; submitted 20 Jan 89]

[Text] The article takes up the questions of the transition of agricultural enterprises to full cost accounting (khozraschet) and self-financing, establishment of differentiated

supplements to purchase prices, the formation of the state order for purchases of agricultural products, rates of payments into the budget and rates of transfers to centralized funds, and the formation of economic incentive funds.

All kolkhozes, sovkhozes, and other enterprises of the APK converted to the new economic conditions as of 1 January 1989. The transition was carried out at a time when the issues of pricing, planning, and financing had not been resolved, when there were a large number of enterprises operating at low profitability and at a loss, when there was a shortage of working capital, and when material and technical supply had not been smoothly organized. What is more, the plans for economic and social development of the APK over the period 1986-1990, approved earlier, were in effect. In 1987, 6,500 kolkhozes and sovkhozes, or 13 percent of their total number, ended their year with a loss (see the table). A group of farms suffering chronic losses was formed, more than 60 percent of the kolkhozes and sovkhozes had low profitability, and most of them were located in RSFSR and Kazakhstan.

Financial Results of the Production Activity of Kolkhozes and Sovkhozes

| Indicators  | 1980 | 1985 | 1987 | 1988 |
|---|------|------|------|------|
| Number of farms, in thousands                             | 47   | 48.9 | 49.9 | 52.8 |
| Breakdown:  |      |      |      |      |
| profitable  | 21.4 | 40.2 | 43.4 | 50.5 |
| percentage of total                                       | 46.0 | 82.0 | 87.0 | 96.0 |
| operating at a loss                                       | 25.6 | 8.7  | 6.5  | 2.3  |
| percentage of total                                       | 54.0 | 18.0 | 13.0 | 4.0  |
| Net financial result (profit, loss -), billions of rubles | -0.7 | 20.6 | 27.8 | 34.1 |

Conversion of the enterprises to the new economic conditions became an objective necessity long ago. The problem lay in defining the mechanism of full cost accounting and self-financing in the situation as it existed. This mechanism will obviously remain in effect until the end of the economic reform, i.e., until the end of the 12th FYP.

When experience with the conversion of enterprises and organizations to full cost accounting and self-financing was summarized, the following tasks were set:

- to determine to what extent and by virtue of what specific decisions effective use of the new economic condition is guaranteed in the conduct of economic activity;
- to ascertain what is holding back accomplishment of the goals and performance of the tasks set in connection with the transition;
- to evaluate the effectiveness of the new economic methods of management;
- to summarize the process of development of self-management of enterprises in connection with adoption of the Law on the State Enterprise (Association), the Law on the Cooperative in the USSR, and the decree of the CPSU Central Committee and USSR Council of Ministers entitled "On the Transition of

Enterprises and Organizations in the System of USSR Gosagroprom to Full Cost Accounting and Self-Financing";

- to work out a general conception of improvement of the economic mechanism for the 13th FYP and proposals to improve the conditions for conversion of the remaining enterprises and organizations to full cost accounting and self-financing.

One of three alternatives may be used to convert enterprises to full cost accounting and self-financing, depending on the specific conditions:

- by raising purchase prices of products and including in those prices funds intended for establishment of the differentiated supplements, accompanied by revision of enterprise 5-year plans for economic and social development;
- by establishing supplements to purchase prices that are uniform for the kolkhozes and sovkhozes in the oblast (krai) and in the necessary cases for the rayon;
- by setting differentiated (in essence, individual) supplements to purchase prices.

The first alternative is the most complicated, since it objectively requires that the purchase prices of specific products be painstakingly balanced, for which in most

oblasts and krais they are not ready. But this alternative should not be excluded, since it best corresponds to the conception of conversion of enterprises to full cost accounting and self-financing. In this case, it is inevitable that some of the kolkhozes and sovkhoses will be operating at a planned loss or at planned low profitability, but this does not discredit cost accounting. Appreciation of the real state of the economy, of the level of economic activity, and of production efficiency is more necessary than subjective constructs.

The second alternative is being applied in Estonian SSR as an experiment. There are also kolkhozes and sovkhoses operating at a planned loss and at planned low profitability there.

With certain changes and additions, the third alternative is being used in the conversion of enterprises to full cost accounting and self-financing in most oblasts. As a rule, the existence of kolkhozes and sovkhoses operating at a loss was not assumed in the calculations. Because differentiated supplements are applied to purchase prices through the volume of marketed output, a minimal level of self-financing is achieved.

The conversion of kolkhozes and sovkhoses to full cost accounting and self-financing was worked out through a relative equalization of the starting conditions of the oblasts (krays) and rayons and ultimately the individual farms. This solution is the only possible one when we take into account that all enterprises, including those operating at a loss, are to carry on their activity on the basis of self-financing, not out of what they have earned.

The question arises whether in this case the principle of cost-accounting relations should be foregone and a departure made from the general orientation of improving the economic mechanism of economic activity. From our point of view, this approach is justified, since it stimulates the growth of food resources and helps farms operating at low profitability and at a loss to gain experience in operating independently on the principles of cost accounting.

Differentiated supplements to purchase prices were established everywhere in accordance with the relevant recommendations as to methods. In RSFSR, a balance sheet of incomes and expenditures was drawn up for each farm separately. Expenditures were determined on the basis of the targets of economic and social development contained in the plan. The income side was based on actual revenues of the enterprise, including proceeds from the culling of livestock and the sale of retired property, profit, depreciation, i.e., on the sum total of the farm's own financial resources in the previous year and on the size of their growth by virtue of the growth of marketed output and reduction of production cost.

The difference between the calculated sums of expenditures and income was made up with resources allocated for differentiated supplements as well as with credits. Within that total, supplements for specific types of purchase prices were determined for each farm.

In most of the republic's oblasts, planned total profitability was increased to 25-30 percent on kolkhozes and sovkhoses, the proportion of differentiated supplements to wholesale prices per ruble of gross output was differentiated from oblast to oblast over a spread from 1 to 5 or more, and per ruble of remuneration of labor it was differentiated over a spread from 1 to 4-5.

Differentiated supplements to purchase prices were mainly established on the products of animal husbandry. This was mainly related to the low profitability of this branch and the comparatively uniform sales of the products of animal husbandry during the year, which is important for the flow of money into the farm's accounts.

As for the level of the supplements, various schemes have been applied in determining them. For example, in Glazunovskiy Rayon of Orel Oblast they were established for each farm in a differing percentage of the purchase price. The supplement to the price for cattle ranged between 30 and 118 percent, for milk from 50 to 185 percent; the supplement for one kolkhoz's wool was set at 220 percent. The sum total of supplements for this rayon amounted to 8.7 million rubles, or 621,000 rubles per farm and 0.31 ruble per ruble of gross output. Previously, the amount which all the kolkhozes and sovkhoses here received from the budget was 11.7 million rubles, and since 1988 it has been 3 million rubles less.

In Buturlinovskiy Rayon of Voronezh Oblast, supplements to purchase prices of milk, cattle, swine, and wool were set in a uniform percentage, but then differentiated by farms. For example, on the "Berezovskiy" Kolkhoz the supplement for these products was 36 percent, on the Kolkhoz imeni Lenin 21 percent, and on the Kolkhoz imeni Pushkin 10 percent. Supplements were not established for 9 out of the rayon's 17 kolkhozes and 1 out of its 4 sovkhoses, and the rise in the cost of machines and equipment was not compensated. Nor were differentiated supplements established for specialized farms, but the supplements for heavy livestock were retained. The supplements amounted to 105,000 rubles per farm, the additional payment for heavy young animals was 215,000 rubles (320,000 rubles in all), and per ruble of gross output the supplements amounted to 0.10 ruble. Average calculated profitability of production in the rayon was 30.5 percent, and the range of fluctuation from one agricultural enterprise to another was from 20 to 44 percent.

An analysis shows that there has been a substantial redistribution of financial resources from relatively more favorable regions in the oblast with an extremely neglected agriculture. Analogous processes are being noted within oblasts and rayons.

At the same time, the application of differentiated supplements to purchase prices has resulted in certain contradictions in cost accounting. Large differences in sales prices are in themselves unwarranted; what is more,

they are quite often used to cover mismanagement in certain kolkhozes and sovkhozes so that they would operate on the basis of self-financing. Yet even this goal is not always achieved, since many farms with a profitability under 25 percent are not getting by under the new conditions without borrowing more money from Gosbank.

The economic reform is pursuing the goal of achieving a certain social justice and of forming new economic relations in rural areas. The supplements to purchase prices do not make it possible to solve this problem, and on a certain portion of kolkhozes and sovkhozes they do not reinforce cost accounting. It follows that this approach to solving the problem of cost accounting and self-financing is not applicable in the 13th FYP.

It is advisable to establish uniform differentiated supplements for kolkhozes and sovkhozes converted as of 1 January 1989 to the new economic conditions, as has been done on the farms of Estonian SSR. At the same time, subsidies paid at standard rates from centralized funds should be established for kolkhozes and sovkhozes operating at a loss and low profitability over the period up to 1990.

The state order is an important element in the operation of enterprises on the basis of full cost accounting and self-financing. In the form in which the state order is applied today, it does not differ in practical terms from a firm plan for purchases. That is why the farms have been deprived of the possibility of being seriously concerned with optimizing the structure of their output, without which it is difficult to adjust production so that it is profitable.

In a number of oblasts of RSFSR, certain attempts have been made to change the production structure in connection with the transition of kolkhozes and sovkhozes to cost accounting. Specifically, in Vladimir Oblast nine farms were reoriented. In Ryazan Oblast, the farms themselves changed the distribution of the area planted and the composition and number of head of livestock, thereby guaranteeing performance of contracts for sale of agricultural products to the state.

But in a majority of cases the practice is the same of including a fixed assortment of products in the state order, without taking into account the capabilities of the farms. For instance, the "Pravda" Sovkhoz in Vladimir Oblast was given a state order that included the sale of rapeseed, although for 3 years it has not harvested this crop. In zones where agriculture is unstable, the specific features of production are not sufficiently taken into account when orders are made up for the products of cropping. Many years of experience have shown that the basis taken for planning in these regions should be the average annual yield of farm crops not over the last 5 years, as is now done, but over the last 10 years. Fulfillment of the state order for grain production without taking into account the conditions that have come about will do harm to animal husbandry and will

not make it possible to build up reserve stocks of seed and to count on remuneration in kind with grain.

Cases are not uncommon in which almost all marketed output of animal husbandry is delivered in fulfillment of the state order, and consequently little is left to satisfy the needs of the local population. For example, in Pyarnuskiy Rayon of Estonian SSR 81 percent of products purchased were included in the state order for export, and edible offals comprised 80 percent of what was left in the rayon. This is no incentive for local authorities to increase meat production.

The state order is having a particularly adverse effect on the performance of farms operating at a loss or low profitability in the current 5-year planning period. From every point of view, it is inadvisable, even when there is a food shortage, to maintain the present structure of production of kolkhozes and sovkhozes with sales prices that are 3-5-fold higher than the purchase prices in effect. In our view, the production of such products should be cut back or discontinued altogether. This undermines economic considerations and results in inefficient utilization of resources.

In many cases, the state order is not being backed up with deliveries of supplies and equipment, the growth of purchases under the state order is based on the assumption of higher efficiency of utilization of the potential of kolkhozes and sovkhozes. During the first 3 years of the current FYP, industrial ministries have fallen short in deliveries to farms and organizations of the agroindustrial sector by 41,700 tractors, 3,300 trucks, 600 excavators, 1,600 bulldozers, 1,700 scrapers, and a great deal of other equipment. The equipment delivered does not hold up for a normal operating life, nor are spare parts being supplied.

On behalf of an authentic broadening of the independence of kolkhozes and sovkhozes and of granting them the opportunity to negotiate broad maneuvers in reorienting their production structure and intensifying their specialization in view of specific production conditions and the existing demands of consumers, the size of the mandatory sale of products to the state in the form of the order should be diminished and in the very near future cut back to the sale of the most important products (grain, industrial crops, milk, and meat).

When the kolkhozes and sovkhozes were converted to full cost accounting, the rates of payments into the budget were determined from the actual 1986 level and adjusted for the economic assessment of the land and the funds and labor resources available. The rates in effect were taken. As a rule, farms operating at a loss and low profitability were exempted from payments. In most cases, a uniform rate was established for all except industrial-type poultry farms, livestock-raising complexes, and greenhouse farms.

This approach is not warranted in all cases by any means. First, the farms have already paid for most of their productive assets when they acquired them.

Second, the payments seem like penalties for the level of intensification of production. Third, a substantial share of the funds which kolkhozes and sovkhozes have were built up with loans from Gosbank which have not at present been returned (at the beginning of 1988, debt amounted to 148 billion rubles). Interest has to be paid on those loans. What is more, the value of fixed productive capital is recorded without deduction for the wear of these assets. Enterprises which have a high coefficient for the wear on capital assets have additional expenses in their operation.

A contradictory situation is coming about with payments into the budget. For kolkhozes and sovkhozes which before the transition to cost accounting and self-financing were paying small amounts into the budget or were not making them at all, certain benefits with respect to payments into the budget are being preserved under the new condition when the supplements to purchase prices are redistributed among oblasts.

Large differences have come about in the rate of payments farms make to the budget per 1,000 rubles of productive resources. For example, in Gomel Oblast it is 41 kopecks, and in Voronezh it is 70 kopecks. Differences in this indicator are also observed within the oblast. In Ryazan Oblast, the rate of payments into the budget is 1.6 rubles for kolkhozes and sovkhozes, 25.1 rubles for industrial-type poultry farms, and 41.6 rubles for state breeding stations.

Payments into the budget by industrial enterprises in the APK have remained extremely large, which is why only a few of them can carry on their activity on the basis of self-financing. Quite often, as much as 80-90 percent of profit goes for payments into the budget.

The conclusion that suggests itself from what we have said is that the method of arriving at rates of payments into the budget in the APK system is imperfect. It does not take into account the proportion of profit, nor in many cases capital intensiveness and labor intensiveness involved in the specialization of production and the need enterprises have for capital of their own. Given the deformation of the pricing system, the charge on resources cannot be sufficiently substantiated.

In our view, payments into the state budget would best be made in the form of rent payments of kolkhozes and sovkhozes which enjoy more favorable natural and economic conditions, adjusted for the economic assessment of the land, and in the form of an income tax on cost-accounting income that would be paid at rates that would remain stable over the 5-year planning period.

For a majority of kolkhozes and sovkhozes, payments into the budget do not play an essential role in formation of their own financial resources. The situation is different with deductions paid into centralized funds and reserves. There is no legal basis whatsoever that would protect the interests of kolkhozes and sovkhozes with respect to formation of centralized funds.

For instance, RSFSR Gosagroprom broke down to the level of oblagroprom committees the total amounts of contributions to centralized funds of the republic's Gosagroprom paid out of profit and appreciation and it set the percentages of deductions from calculated profit and depreciation for restoration of fixed capital. These deductions are differentiated by oblasts and krais. Oblagroprom committees in turn broke down to RAPO's the amounts for formation of the centralized fund of the oblagroprom. The RAPO's, the agrocombines, and associations distribute these amounts of payments among enterprises and they also form their own centralized fund. Consequently, centralized funds are formed at three levels of administration. Each of them independently determines the deductions of resources to be made to the funds.

In Buturlinovskiy Rayon of Voronezh Oblast, agricultural enterprises pay 15 percent of profit and 10 percent of depreciation into centralized funds, including 11 percent of profit and 2 percent of depreciation to the republic Gosagroprom and the oblagroprom, and 4 percent of profit and 8 percent of depreciation to the RAPO, which represents 30 percent of the total amount of deductions to centralized funds.

By contrast with the previous period, centralized funds are built up not only with contributions from kolkhozes and sovkhozes, but also from interfarm enterprises and enterprises for rendering production services; and the contributions of industrial enterprises have been increased.

The contributions of kolkhozes and sovkhozes to centralized funds are increasing greatly. In Saratov Oblast in 1987, agricultural enterprises transferred 22.7 million rubles to centralized funds and received 36.5 million rubles from them, while for kolkhozes the corresponding figures were 800,000 and 1.2 million rubles. In 1988, enterprises paid 250 million rubles into centralized funds and received 26.1 million from them, while for kolkhozes the figures were 120.6 million and 6.5 million rubles, respectively. The resources of kolkhozes and sovkhozes are redistributed through this fund to the advantage of industrial and service enterprises. In 1988, they paid 9.5 million rubles into the fund and received 21.8 million from it.

The situation that has come about with the formation of centralized funds can be explained by the absence in the system of the country's APK of other sources for building up reserves, by the disorder that prevails in the field of pricing, and by the existence of a large number of enterprises operating at a loss and low profitability. This approach to the formation of centralized funds is possible for a time. It has now become necessary to develop new methods and to create a reliable legal protection of enterprises against arbitrary decisions.

In our view, in the remaining years of the 12th FYP the centralized funds of the APK should be built up to a smaller extent and obtained from a portion of the

resources allocated for the differentiated supplements to purchase prices of products before they are distributed among kolkhozes and sovkhozes. Contributions to these funds from the profit of interfarm enterprises should be prohibited. At the level of the rayon, joint funds can be created on a voluntary basis to carry out collective projects, without the superior administrative agencies having to exact them.

Guidance has mainly come from the standard regulation in the formation of economic incentive funds. The existing transfers to the material incentive fund, the fund for social welfare and cultural programs, and the planned amounts of capital investments were used.

The fund for development of production, science, and technology and the fund for social development were united in 1988 within RSFSR Gosagroprom. Under the guise of recommendations rates for distribution of profit into economic incentive funds were broken down to kolkhozes, which is a violation of the present Model Charter of Kolkhozes.

As a rule, the first version of cost accounting has been applied in state enterprises, and profit rather than income has been distributed. Consequently, the rates of formation of the wage fund were assigned.

In certain oblasts (Vladimir, for example), a reserve fund has been built up, and in most oblasts it was created in 1989.

Agricultural enterprises in Ryazan Oblast received 349.7 million rubles of profit in 1988. The financial plan calls for 39 million rubles to go into the budget, 73 million rubles to go to centralized funds, and 10.4 million rubles to repay loans. That left kolkhozes and sovkhozes 237.3 million rubles, or 68 percent. Of that amount, 142.5 million rubles went to economic incentive funds, or 40.7 percent, and 21.3 million rubles went to the reserve fund of enterprises.

Deductions from profit to finance capital investments, to build up the foundation herd of livestock, and to increase working capital amounted to 32.2 million rubles, or only 9.2 percent of balance-sheet profit. The existence of 12 million rubles of undistributed profit and the reserve fund indicates the relatively good economic conditions for reproduction in many of the oblast's agricultural enterprises.

It is advisable to grant agricultural enterprises the right to distribute themselves the profit (income) remaining at their disposition and to convert them to remunerating labor out of gross income. Conditions also have to be brought about for kolkhozes and sovkhozes to be able to do everything that is not prohibited by law. It is extremely important in that connection to revise existing legislation, instructions, and other normative documents.

The financial resources of the system in principle have to be augmented in order to convert the enterprises and

organizations of the APK to full cost accounting and self-financing if there are no changes in relations with the budget. These resources may grow as a consequence of the reduction of production cost, a rise in the volume of production of marketed products whose purchase prices carry high differentiated supplements. The role of credits in this context undergoes practically no change assuming the same volume of investment in economic and social development. Since under the new conditions these factors have not been sufficiently manifested, in a number of cases there will inevitably be a growth of indebtedness based on credits.

For instance, for the agroprom of Vladimir Oblast, according to calculations for 1988, credit indebtedness rose 5 percent, even though 84.7 million rubles in payments, or 24 percent of the total debt, was deferred to the beginning of 1988. In Gus-Khrustal'nyy Rayon, the average farm owned 5.2 million rubles to Agroprombank at the beginning of 1987 and 5.5 million rubles at the end of 1988, which means a 5.8-percent growth of the debt.

A more vigorous effort is being made under the new conditions to improve economic relations within agricultural enterprises. Particular attention is being paid to strengthening internal cost accounting, to introducing checks as a form of monitoring expenditures, and to organizing operation of subdivisions on the collective and family contract and through leasing arrangements.

Contract collectives of kolkhozes and sovkhozes are cultivating almost all the plowland and attending more than 80 percent of the livestock. In 1988, 2.4 million family and personal contracts were concluded. About 31 percent of kolkhozes and sovkhozes are using leasing relations; on 8.3 percent of them, leasing relations have been adopted in all branches of production. This has made it possible to sharply reduce the number of enterprises and organizations operating at a loss. Whereas in 1987, there were 14,200 enterprises and organizations operating at a loss in the system of USSR Gosagroprom, in 1988 their number dropped to 4,600, or one-third of the previous number.

Some 145 agroindustrial associations and 79 agrofirms have been created in order to strengthen integrative relations, to increase the efficiency of agroindustrial production, and to introduce economic management of production.

### Conclusions

1. It is advisable to establish uniform differentiated supplements to purchase prices for kolkhozes and sovkhozes converted to full cost accounting and self-financing as of 1 January 1989; this will make it possible to achieve a certain social justice and to form new economic conditions in rural areas.

2. There needs to be a substantial reduction of the volume of mandatory sales of products to the state by agricultural enterprises in the form of the order, which in

the near future should be reduced to the sale of the most important products—grain, milk, meat, and industrial crops.

3. Transfers to the state budget should be made in the form of rent payments of kolkhozes and sovkhoses which enjoy the more favorable natural and economic conditions, adjusted for the economic assessment of the land and an income tax on cost-accounting income paid at rates stable for the 5-year period.

4. In the remaining years of the 12th FYP, the centralized funds of the APK should be built up in minimal amounts out of the resources allocated for differentiated supplements to purchase prices of products before they are distributed among kolkhozes and sovkhoses. Contributions to these funds from the profit of interfarm enterprises should be prohibited.

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## MACHINERY, EQUIPMENT

### Farming Efforts Hampered By Lack of Small-Scale Equipment

#### Types of Equipment Needed

18240255 Moscow SELSKAYA ZHIZN in Russian  
21 Jun 89 p 1

[Article by Aleksandr Kurchenko: "Few Machines and a High Demand"]

[Text] Aleksandr Sergeyevich Solovyev dug up a garden and experienced difficulty in working the soil with a shovel. And on the horizon there was a powerful "Kirovets" tractor plowing up a field with an assembly consisting of six plows. This took place in the village of Chuvashotar in the Mary ASSR. Yes and similar sights can be seen in many of our villages.

It became offensive to Aleksandr Sergeyevich and he put away his shovel and for the first time in his long life wrote to a newspaper: "You are asking us peasants to expand our gardens and to establish our own small farms. We are prepared to do this as we still harbor a desire to work the land. But look: the kolkhoz continues to receive more equipment with each passing year, while in my barn I am left with a hoe, a scythe and a rake. This is all the mechanization we have. I would like to purchase a small tractor, for example a "Vladimirets," with a set of detachable implements. But where can this be done? Nobody is selling small-scale items of equipment anywhere. Is there nobody who shows concern for us?"

His words were echoed by Aleksandr Kharitonenko in the village of Lipin Bor in Vologda Oblast: "They complain about the empty counters in the stores. Yes, we could fill them up with products—but first we must have small-scale equipment. Indeed this cannot be done with bare hands either on a private plot or on a leased tract of

land. Convey this heartfelt appeal to those upon whom the production of such equipment is dependent. We cannot plow our land or feed our cows on the basis of slogans and appeals alone."

There is another factor that is alarming the people. "I am now past 60 years of age. I have spent my entire life in the countryside. I have raised three sons and I have always thought that they would remain with us. But upon leaving for the army, my senior son stated: 'I am finally free of the scythe, shovel and hoe. After serving my time, I will not return home.' And so it turned out. My younger sons are also reluctant to use the implements of the time of Prince Igor as they head for the city. I will not hold them back. We have a cow and a garden which is one tenth of a hectare in size. It is impossible to obtain anything more. It was 20 years ago that I wrote to the ministries of agriculture and agricultural machine building and asked them to provide us with small-scale equipment. The officials remained silent and obviously out of fear that I might become rich. And today my sons are leaving—what will become of the farm? How long must we wait for a small-scale tractor with a full set of implements? We receive many promises. But the village is becoming smaller as people abandon it." Such were the thoughts expressed by Vasilii Pavlovich Shatokhin at the Buzanskiy Sovkhoz in Astrakhan Oblast.

Yes, other readers will forgive me—the authors of letters on this theme; it is impossible to mention all of them on a newspaper page. But they are unanimous in one sense—the rural areas must eventually be supplied with high quality and relatively inexpensive small-scale equipment. But how long must they wait for it?

Let us examine the situation. Today the Minsk, Kutaisi, Leningrad and other tractor builders are producing approximately 100,000 motorized units yearly. According to the most humble estimates by specialists, the requirement for such units is in excess of 1 million units. These small-scale items of equipment do not remain in the stores very long: there is a critical shortage of such products at the present time. If there was an adequate supply of them, it would be possible, within a brief interval of time, to include in agricultural production more than 3 million hectares of unsuitable land and to work 35 million private plots of rural residents and 10 million of city-dwellers.

The reserve for growth in food resources is tremendous and in terms of scale it is comparable to the development of the Kazakhstan virgin land. But so near and yet so far. The conclusions drawn by the readers are indisputable; it is impossible to plow, sow or work such an amount of land manually using shovels and hoes.

When will the machine builders supply the market with the needed implements? No earlier than by the end of the millenium. By 1995 alone, the plans call for the mass production of mini-tractors in volumes of 15,000-16 000 units at the Kharkov, Kutaisi, Gomel and other plants.

It can be stated bluntly that this is a gloomy prospect. Today we are discussing revolutionary changes. In the villages they are visible and perceptible: land is being returned to the peasants—those who provide the country with food and drink. And on high, where Gosplan and the ministries must supply the peasants with the needed items of equipment, we encounter only a storm of words and documents. Minavtoselmash [Ministry of Automotive and Agricultural Machine Building] lacks an efficient and specific production program for small-scale equipment. Practically speaking, no study is being undertaken of the demand for this equipment.

The plant production lines are continuing to turn out such giants as the "Kirovets," "T-150" and other machines, the requirements for which are dropping catastrophically. According to the Minister for Automotive and Agricultural Machine Building, N.A. Pugin, the consumers have rejected 1,650,000,000 rubles worth of the branch's finished products. The supplies of equipment that are rusting in the warehouses and on plant platforms represent a heavy economic burden. And the giant ministry chooses to overlook the true needs of the rural areas. Yes, it is beyond any doubt difficult, within a period of 2-3 years, to reorient production towards the production of small-scale equipment. But this can and must be done!

This has been proven by thousands of skilled craftsmen who, using scrap metal and plant products, assembled home-made mini-tractors and other items of equipment. The designers should not be ashamed to borrow from their experience and in this manner extricate themselves from a difficult situation. In order to do this, they must reject certain dogmas, bureaucratic methods and an enormous number of agreements. And they must listen to the one voice—that of the consumer. He is always right!

The motorized units are selling like hotcakes and mainly because of the shortage in such items. This deficit is stifling the conscience of the machine builders, who are supplying the rural areas with wretched items of equipment.

"I purchased a motorized unit from the Perm Motor Construction Plant. Since that time, I have had nothing but problems with it. The motor broke down after 50 hours of use. Then the belts broke and I had trouble with the connecting rods. Made out of duralumin, they break down in the manner of crusts of bread." Such was the report which the Editorial Board received from Mikhail Ivanovich Kuznetsov in the city of Kupino in Novosibirsk Oblast.

But here is some more authoritative testimony.

"The motors of many small-scale items of equipment do not operate in a stable manner. It is obvious that from a design standpoint they are in need of improvement," stated the chief of the Department of Agricultural Implements and Light Mechanization of Tsentrsoyuz [USSR Central Union of Consumers' Societies], V. Shuntova.

There is but one conclusion here—small amounts of equipment and of poor quality. And there is still one other negative aspect of the motorized units as pointed out by the readers. One must be a good athlete in order to keep up with the equipment. Yes, more than 1 dozen kilometers daily during the field work period. This is beyond the capability of elderly people and alas they are the principal individuals in today's villages. Similar to air, we need tractors with from 10 to 12 horsepower, comfortable seating and a complete set of implements. And the price must be less than that for an automobile.

They are being demonstrated in a very generous manner at exhibits—but they are still not available in the stores. There is a proposal by Minavtoselmash—to return to producing the simple and cheap DT-20 tractor. Although large farms may not need them, nevertheless they could provide good service for private plots and gardens. Other unique solutions are also possible, but we must search for and devote greater thought to them. Our departments are not accustomed to doing this.

But life is forcing us to do this. Thus it is best to start early—the villages can wait no longer.

### Follow-up Commentary

18240255 Moscow SELSKAYA ZHIZN in Russian 18 Jul 89 p 2

[Article: "Few Machines and a High Demand"]

[Text] A review was published on 21 June under the title "Few Machines and a High Demand." The Ministry of Automotive and Agricultural Machine Building has examined this material. As reported by the acting deputy chief of the Main Scientific-Technical Administration of the ministry, V.L. Zaytsev, the requirements of leaseholders and the country's population for small-scale agricultural equipment are by no means being satisfied fully at the present time.

Measures are being undertaken aimed at saturating the market. More than 30,000 additional tractors of the T-25, MTZ-80 and other types, with power ratings ranging from 25-80 horsepower, will be sold this year.

Designs have been developed and preparations are underway for the production of small-scale "Goldoni-718" tractors at the Production Association of the Kutaisi Plant for Small-Scale Tractors, the T-8 at the Production Association at the Kharkov Tractor Plant and others. Before the end of the year, the consumers will be supplied with 2,000 such machines.

Taking into account the fact that at the present time the requirements of leaseholders and the population for small-scale equipment are not being satisfied, Minavtoselkhoz mash, together with the interested ministries, developed an inter-branch operational program for 1989-1995 for the production of small-scale equipment and also machines and equipment for leaseholders.

## POLICY, ORGANIZATION

### Statistics Show Retail Price Hikes

904D0011a Moscow IZVESTIYA in Russian 16 Oct 89  
Morning Edition p 1

[Yu. Rytov report: "What Price is the Price Index?"]

[Text] The USSR State Committee on Prices reports that the retail price index for foodstuffs is 121 points in 1989 against the 1988 level (a rise of 21 percent). But the figure for nonfood commodities is 99.1 (a decline of 0.9 percent).

It is possible that these figures will astonish some of our readers. For each of us feels the unrestrained growth of prices in his own pocketbook! How can it be that the retail price index for industrial articles has not only not increased but even declined?

Do not be surprised. It is the accounting method that we use. The retail price indexes reflect only the changes to them applied by decisions of the USSR Council of Ministers, the union republic councils of ministers, and the executive committees of the soviets of people's deputies. And also price fluctuations in the marketing of agricultural products purchased by the consumer cooperative system at contract prices.

And so, the dynamics of current retail prices reflects their growth or decline only with respect to articles under a particular product designation. Changes in the group and range structure of articles sold are in this case disregarded.

Hence we draw a very important conclusion. Neither the central nor the local authorities have taken decisions about price increases. So how do they rise just by themselves?

The mechanics of this are extremely simple. The product designations for articles change, and the prices change. If you sew an extra pair of buttons on your overcoat you can then boldly pass it off as new, as a particularly stylish item...

So how to assess real price increases?

Our statistical service has made its first diffident attempts at this. I have before me a summary of average prices for foodstuffs in state and cooperative trade, based on a study of family budgets. Here are the figures it is citing. In 1980 a kilogram of beef cost (for the families of workers and employees) R2.17. But last year the figure was R2.53. The figures for a kilogram of sausage are R2.76 and R3.71; for potatoes, R0.15 and R0.20, for vegetables and melons, R0.39 and R0.47, for confectionery items R3.02 and R3.31...

Unfortunately, the range of industrial goods shown in the summary is very meager. From it we learn only that the cost of a meter of fabric fell during the same period from R4.70 to R4.35, and knitted underwear from R3.73

to R3.35 per item. To make up for this the cost of a pair of shoes rose from an average of R16.91 to R20.12.

So how, specifically, does price inflation work? Most enterprises that enjoy a monopoly position and take advantage of the substantial shortages expand output of index "N" goods without essentially improving quality (adding up to 30 percent to the price), and the output of articles sold at contract prices (index "D", with no limitations on the size of increases). Compared with the same period last year, during the first 8 months of this year, production of articles sold at contract prices has increased 28.6 percent, while articles in the "N" index have risen 8.8 percent. As a result the proportion of such goods as part of total output has risen from 30 percent in 1987 to 41.5 percent today.

The other side of the coin is, naturally, erosion of the range of inexpensive goods. During this same period there was a shortfall of R2.3 billion in targets for the production of articles marketed at accessible prices (without additions!) by light industry enterprises.

And there are enterprises that are breaking phenomenal records in this business. Thus, at the Leningrad "Krasnoye Znamya" Knitted Wear Association, prices for nine kinds of ladies' dresses, jumpers, and blouses are 1.2 to 2.9 times higher than the regular prices.

But what advantage can consumers gain from these kinds of maneuvers? Here is a typical example. For a lady's jumper (model 824) with a "D" index the retail price has been raised from R6.90 to R20. But the additional costs amount only to R2.56. This is what the price index is now.

And in general, according to expert assessments, during the first half of the year, light industry enterprises obtained about R1.5 billion through additions to retail prices. Almost one-fifth of total profit growth...

I think that the situation is understandable. And the concern and agitation that this problem provoked at a session of the USSR Supreme Soviet are also understandable. You remember that opinions were divided. "Freeze retail prices!"—this was the categorical demand made by some deputies. "Use economic levers to regulate them"—that was the viewpoint of the other side.

What can be said about the discussion that has taken place? Of course, a price freeze is possible. But economic laws cannot be set aside. If demand for goods exceeds supply then prices will inevitably rise. And if we impose bans in the state sector the shadow economy will definitely take its revenge.

Meanwhile, the search for an acceptable solution continues.

## Retail Trade Prices Surveyed

### Pricing Mechanism Censured

18270144 Moscow SOVETSKAYA TORGOVLYA in Russian No 104, Aug 89 p 4

[Article by Mark Maryasin, section director in the Credit and Financing NII [Scientific Research Institute] of Banking, candidate of economic sciences: "Money and Purchases"]

[Text] The first quarter of 1989 was characterized by an increase in the deficit and in prices. Statistical data attests to the fact that in the RSFSR, for example, the growth index for prices for consumer goods equalled 102 percent as compared to the same period in 1988 for the families of workers and employees and by 103 percent for the families of kolkhoz farmers.

In the republic as a whole during the first quarter of 1989 as compared to the first quarter of 1988 expenditures for food per family member increased by 6 percent for workers, employees and kolkhoz farmers. Within the group of non-production commodities this increase was even greater—for families of workers and employees it comprises 14 percent, and for families of kolkhoz farmers—6 percent.

The table presents some data from RSFSR Goskomstat [State Statistical Committee] on the dynamics of average purchase prices for individual types of food and non-food commodities.

As we can see, per capita food production has begun to decrease. Thus, according to data from the Kostroma Oblast Statistical Administration, during the first quarter of 1989 in families of industrial workers and employees meat consumption decreased by 14 percent, consumption of dairy products—by 1 percent, of potatoes—by 2 percent, of vegetables—by 7 percent, and of fruit and berries—by 15 percent. In this case in the market the prices of vegetables and fruit exceeded the level of state prices by almost 70 percent, and of meat and milk—by 44 and 89 percent respectively.

The decrease in food supplies and of many non-food items to the population is causing great concern among the people. This is attested to by letters to the editor.

Comrade Pavlov from the city of Vyazma writes, in particular, that with the transition of the enterprise of light industry to cost accounting inexpensive items vanished from the stores. The few things that occasionally appear on shelves are bought out by cooperatives for subsequent insignificant processing and sale at speculative prices. The letter poses the question of introducing coupons for acquiring goods at socially low prices, including children's goods. In the opinion of the author, this measure would close channels by which money that is not earned through useful labor comes into cooperatives. Moreover, he proposes the introduction of a

system of declarations to check income of cooperatives, honorariums of artistic workers and so forth.

Similar proposals are put forth by Moscow resident Ogorodnikova, who also is concerned about the absence of goods in stores and about long lines made up primarily of non-residents. The introduction of trade by pass-port is her solution to the problem.

Of course, we can understand the concern and alarm of readers; however, the measures they propose can hardly be considered valid. The country needs economic keys for managing the economy, including the consumer market.

The fundamental questions include why, with the transition to cost accounting, industry has sharply curtailed the production of inexpensive goods, which has resulted in the development of cooperatives that are involved in the recovery of non-labor resources.

If we respond briefly to these questions we must first and foremost note the imperfection of the economic mechanism that is in place today. As of now, attempts to restructure it have not yielded noticeable results, and could not have since they, unfortunately, are not system-wide and all-encompassing.

Specialists have made various recommendations regarding the transition to a new management method. However, our country is not a polygon for experimentation in which one idea can be tried out today, and if it does not work, another can be substituted. Systematic scientific research, the goal of which is to juxtapose various concepts of development of the national economy and on this basis to select the most effective strategy and tactics for solving socio-economic tasks, is extremely important.

The general urgency of this problem is attested to, in part, by the report of Comrade Yu. D. Maslyuk at the session of the USSR Supreme Soviet in which he characterizes the priorities and prospects for development of the Soviet economy in the future as worked out by USSR Gosplan. Undoubtedly, there is no reason to refute the principle directions of this report and the goals and tasks it presents. Nevertheless, a number of proposals in the speech by the chairman of USSR Gosplan give rise to certain bafflement.

First of all one receives the impression that the leading economic department in the country has approached the solution to the problem of establishing prospects for development of the national economy under condition of perestroika according to the antiquated technology that has discredited itself; plan projections have been composed without a consideration of the real dynamics of material, trade and financial resources. This kind of situation, as we know, in the past was one of the main reasons for the non-fulfillment of quotas of preceding five-year plans according to the majority of the most important indicators.

This kind of obsolete approach, when with national economic planning material-commodities considerations are made a top priority, has already resulted in a budget deficit equalling 120 billion rubles and in a sharp rise in inflationary processes.

Also alerting us is the absence in USSR Gosplan proposals of a mechanism for the practical realization of plan goals. Those few ideas that were presented to the supreme soviet are in no way adequate, especially if we consider the decisions that were made earlier concerning

expanding economic independence of enterprises and the transition to regional cost accounting.

These and other negative cases must be taken into consideration when preparing concepts and the Basic Directions for Economic and Social Development in the USSR for the 13th Five-Year Plan and for the more long-term future. The country must finally achieve a scientifically-based, overall balanced program for rejuvenating the national economy.

|  | Workers and employees |       | Kolkhoz farmers |     |
|--|-----------------------|-------|-----------------|-----|
| Food products (per kilogram):                          |                       |       |                 |     |
| Grain products   | 0.47                  | 102   | 0.31            | 103 |
| Potatoes   | 0.31                  | 115   | 0.53            | 120 |
| Vegetables and melons                                  | 0.79                  | 101   | 1.05            | 111 |
| Fruits and berries                                     | 1.77                  | 111   | 1.87            | 115 |
| Meat and meat products                                 | 2.80                  | 100.7 | 3.58            | 98  |
| Fish and fish products                                 | 1.41                  | 104   | 1.21            | 104 |
| Sugar (including that used for confectionary products) | 2.21                  | 101   | 1.51            | 106 |
| Non-production commodities:                            |                       |       |                 |     |
| cotton products  |                       |       |                 |     |
| —per meter   | 1.89                  | 104   | 1.77            | 103 |
| leather footwear                                       |                       |       |                 |     |
| —per pair  | 29.18                 | 121   | 24.74           | 94  |
| stockings, socks                                       |                       |       |                 |     |
| —per pair  | 2.48                  | 112   | 1.96            | 104 |
| household soap   |                       |       |                 |     |
| —per kilogram  | 0.64                  | 100   | 0.62            | 105 |
| toilet soap  |                       |       |                 |     |
| —per kilogram  | 2.56                  | 112   | 2.32            | 109 |

1. Average purchase prices in the first quarter of 1989, rubles. 2. In percent of 1 kilogram, 1988.

**Goskomstat Statistics**

[Text]

18270144 Moscow SOVETSKAYA TORGOVLYA in  
Russian No 104, Aug 89 p 4

[Chart: "What do Things Cost?"]

| Price of Commodities: Meat |      |      |      |      |      |      |      |      |
|----------------------------|------|------|------|------|------|------|------|------|
|                            | 1    |      | 2    |      | 3    |      | 1    |      |
|                            | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| Moscow                     | 2.00 | 2.00 | 3.80 | -    | 7.56 | 8.45 | 28   | 28   |
| Yaroslavl                  | 2.00 | 2.00 | 4.80 | 5.00 | 5.00 | 5.50 | 28   | 28   |
| Leningrad                  | 2.00 | 2.00 | -    | -    | 6.00 | 7.67 | 28   | 28   |
| Gorkiy                     | 2.00 | 2.00 | 4.80 | 4.80 | 6.00 | 6.38 | 28   | 28   |
| Voronezh                   | 1.90 | 1.90 | 3.90 | 3.90 | 4.00 | 4.00 | 24   | 24   |
| Kuybyshev                  | 1.90 | 1.90 | 4.10 | 3.50 | 6.00 | 6.05 | 28   | 28   |

## Price of Commodities: Meat

|               | 1    |      | 2    |      | 3    |      | 1    |      |
|---------------|------|------|------|------|------|------|------|------|
|               | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| Kazan         | 1.90 | 1.90 | 4.70 | 3.50 | 5.00 | 5.00 | 24   | 24   |
| Rostov-on-Don | 1.90 | 1.90 | 3.50 | 3.50 | 4.00 | 4.00 | 24   | 24   |
| Sverdlovsk    | 2.00 | 2.00 | 4.80 | 4.90 | 5.00 | 5.00 | 28   | 28   |
| Chelyabinsk   | 2.00 | 2.00 | 4.20 | 4.50 | 5.00 | 5.13 | 28   | 28   |
| Kemerovo      | 2.00 | 2.00 | 4.30 | 4.30 | 4.00 | 5.00 | 28   | 28   |
| Novosibirsk   | 1.90 | 1.90 | 3.70 | 3.70 | 4.00 | 5.33 | 24   | 24   |
| Khabarovsk    | 2.10 | 2.10 | 5.00 | 5.00 | 6.00 | 6.00 | 36   | 36   |
| Kiev          | 1.90 | 1.90 | 3.90 | 3.90 | 5.00 | 5.00 | 24   | 24   |
| Lvov          | 1.90 | 1.90 | 4.00 | 4.20 | 5.00 | 5.00 | 24   | 24   |
| Donetsk       | 1.90 | 1.90 | 3.80 | 3.80 | 5.00 | 4.50 | 24   | 24   |
| Riga          | 1.90 | 1.90 | 3.50 | 3.50 | 6.25 | 7.50 | 24   | 24   |
| Tbilisi       | 2.00 | 2.00 | 4.70 | 5.00 | 6.75 | 7.00 | 28   | 28   |
| Tashkent      | 1.90 | 1.90 | 4.50 | 5.00 | -    | -    | 28   | 28   |
| Alma-Ata      | 1.90 | 1.90 | 3.80 | 3.80 | 4.21 | 4.90 | 24   | 24   |
| Karaganda     | 1.90 | 1.90 | 3.90 | 3.90 | 4.50 | 5.00 | 24   | 24   |
| Minsk         | 1.90 | 1.90 | -    | -    | -    | -    | 24   | 24   |

Key to table: 1. State trade associations; 2. Cooperative trade; 3. Kolkhoz markets.

## Retail Prices in State Cooperative and Kolkhoz Trade as of 22 May 1988 and 1989 (Farm products—kopecks per kilogram; Meat—rubles and kopecks per kilogram; Milk—kopecks per liter; Eggs—rubles and kopecks per ten)

|               | Milk |      | Eggs |      |      |      |      |      |
|---------------|------|------|------|------|------|------|------|------|
|               | 3    |      | 1    |      | 2    |      | 3    |      |
|               | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| Moscow        | 101  | 154  | 0.90 | 0.90 | 1.00 | -    | 1.90 | 2.17 |
| Yaroslavl     | -    | -    | 0.90 | 0.90 | -    | -    | 1.60 | 1.65 |
| Leningrad     | -    | -    | 0.90 | 0.90 | -    | -    | 2.00 | 2.50 |
| Gorkiy        | 95   | 100  | 0.90 | 0.90 | 1.05 | 0.90 | 1.50 | 1.80 |
| Voronezh      | 80   | 80   | 0.80 | 0.80 | 0.80 | 0.80 | 1.20 | 1.00 |
| Kuybyshev     | 100  | 100  | 0.90 | 0.90 | 1.30 | 1.10 | 1.50 | 1.40 |
| Kazan         | 70   | 70   | 0.80 | 0.80 | 1.20 | 1.00 | 1.20 | 1.20 |
| Rostov-on-Don | 100  | 100  | 0.80 | 0.80 | 0.80 | 0.80 | 1.05 | 1.05 |
| Sverdlovsk    | 100  | 100  | 0.90 | 0.90 | -    | -    | -    | -    |
| Chelyabinsk   | 50   | -    | 0.90 | 0.90 | 1.00 | 0.90 | 1.35 | 1.34 |
| Kemerovo      | 50   | -    | 0.90 | 0.90 | -    | -    | -    | -    |
| Novosibirsk   | 60   | 60   | 0.80 | 0.80 | 1.10 | 1.20 | 1.50 | 1.50 |
| Khabarovsk    | 90   | 90   | 1.00 | 1.00 | -    | -    | -    | -    |
| Kiev          | -    | -    | 0.80 | 0.80 | -    | -    | 1.24 | 1.18 |
| Lvov          | 50   | 50   | 0.80 | 0.80 | -    | -    | 0.90 | 0.90 |
| Donetsk       | 70   | 70   | 0.80 | 0.80 | 1.00 | 0.80 | 1.20 | 1.20 |
| Riga          | 100  | 100  | 0.80 | 0.80 | -    | -    | 1.85 | 2.25 |
| Tbilisi       | 183  | 175  | 0.90 | 0.90 | -    | 1.10 | 1.77 | 2.00 |
| Tashkent      | 60   | 60   | 0.90 | 0.90 | 1.40 | -    | 2.00 | 2.13 |
| Alma-Ata      | 50   | 50   | 0.80 | 0.80 | 1.00 | -    | 1.23 | 1.25 |

Retail Prices in State Cooperative and Kolkhoz Trade as of 22 May 1988 and 1989 (Farm products—kopecks per kilogram; Meat—rubles and kopecks per kilogram; Milk—kopecks per liter; Eggs—rubles and kopecks per ten)

|           | Milk |      | Eggs |      |      |      |      |      |
|-----------|------|------|------|------|------|------|------|------|
|           | 3    |      | 1    |      | 2    |      | 3    |      |
|           | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 | 1988 | 1989 |
| Karaganda | -    | -    | 0.80 | 0.80 | -    | -    | 1.20 | 1.20 |
| Minsk     | 50   | 50   | 0.80 | 0.80 | 1.10 | -    | 1.50 | 1.60 |

Key: 1. State trade associations; 2. Cooperative trade associations; 3. Kolkhoz market. Note: In most of the aforementioned cities city cooperative stores did not sell milk.

### Reorganization of Bureau for Social Development Described

18280288 Moscow PRAVITELSTVENNIY VESTNIK  
in Russian No 18, Sep 89 p 4

[Interview with I.I. Prostyakov, deputy chairman, USSR Council of Ministers Bureau for Social Development, by Ye. Sosnin, correspondent: "A Turning Toward Human Beings"]

[Text] Introducing our interviewee: Prostyakov, Igor Ignatyevich was born in 1941. He began his working life as an metal worker in 1957. He was employed as a fitter, foreman, and an engineer at a number of enterprises and organizations. In 1965, without interrupting his production work, he graduated from the Moscow National Economic Institute imeni G.V. Plekhanov, majoring in economics. He is a Candidate of Economic Sciences and a member of the CPSU.

In 1966 he began working in USSR Gosplan and in 1978 in the apparatus of the USSR Council of Ministers. In 1982 he was promoted to chief, Division for Improving the Administration of the National Economy, and in 1985 to chief, Economics Division for Administration of Affairs, USSR Council of Ministers. In 1987 Prostyakov was appointed deputy chairman, USSR Council of Ministers Bureau for Social Development.

The government decree entitled "On the Structure and Status of the Apparatus of the USSR Council of Ministers Bureau for Social Development" notes that the decisions adopted by the USSR Congress of People's Deputies require that the state organs make a fundamental turning toward human beings and guarantee a radical rise in the people's standard of living, along with a consistent implementation of the principle of social justice.

Our interviewee—I.I. Prostyakov, deputy chairman of the USSR Council of Ministers Bureau for Social Development—shares his ideas about the principles of the activity engaged in by this permanent governmental organ.

[Ye. Sosnin] Igor Ignatyevich! The Bureau for Social Development also functioned previously within the USSR Council of Ministers—beginning in 1986. In what respects will its present-day organizational structure be different?

[I.I. Prostyakov] If you were to compare the Bureau's former and present-day structures, you would immediately draw a conclusion concerning the imminent serious turn in the Bureau's work. The former structure had a clearly expressed sectorial nature. There were subdivisions on matters of education, culture, sports, housing and community services, light industry, trade—virtually the entire gamut of ministries involving the social complex. In other words, a unique representation in the ministries and departments in a government apparatus.

But you will agree that each individual sector could engage itself in a great deal of persistent work but still not have the main thing—a strong social policy. The forest was not seen for the trees, and the overall perspective was lost. Therefore, we decided to restructure the organization of our own apparatus.

[Ye. Sosnin] Should we assume that there are also changes in the nature of the functions?

[I.I. Prostyakov] Yes, and extremely serious ones at that. First of all, this entails the conversion from the sectorial approach (although the sectors will certainly remain within our field of vision) to a strong, well-balanced social policy. And it can be strong only if it is based upon the specific interests of specific groups of the population. Moreover, we had long permitted an averaged-out approach to human beings. By the way, this likewise led to a rise in social tension, with which we now have to grapple....

We wish to impart a new profile to our Bureau—to turn its face toward human beings as much as possible, to specific social and occupational groups—to young persons, working people, and to veterans of war and labor. We wish to reach the specific concerns of orphaned children, the needs of invalids and of persons living below the minimum standard of living.

Another aspect of restructuring the Bureau's function has been brought about by the new demarcation of the spheres of influence among the central, republic-level, and local organs of power. As you know, very soon now the supervision and leadership of sectors in the social and cultural sphere will be concentrated in the union and autonomous republics, as well as in the local soviets of people's deputies. This corresponds to the course aimed at expanding the sovereign rights of the republics, the

development of self-government, and the conversion to regional cost accounting. That's why the Bureau's functions and operational methods in this sphere will now be completely different.

[Ye. Sosnin] The social sphere is broad and complex. What kinds of qualities must be possessed by those specialists engaging in these matters? What is the professional level of your Bureau's staff members?

[I.I. Prostyakov] Indeed, the social sphere, if we take it on a broad basis—as the conditions of people's work, life, and day-to-day concerns—comprises an interweaving of the most diverse sectors of the national economy and fields of human knowledge. Therefore, the easiest way to recruit for the Bureau would be to superficially select staff members in accordance with sectors and fields of specialization which are directly linked to the social sphere.

Let me say straight out that the Bureau immediately rejected such a method of guidance. It would be inefficient and, moreover, would lead to the creation of a clumsy, essentially uncontrollable apparatus. We now have one that is modest in size and mobile. Many persons cannot believe this, but its number amounts to only 93 persons—several times smaller than the apparatus of any other union ministry. Therefore, the demands made upon the personnel are extremely high.

Everyone who works at the Bureau is united by one thing—a rich experience in the school of life. The overwhelming majority of the specialists previously headed up large labor collectives in the most diverse sectors of the national economy. Yet another feature—more than a third of all our staff members have academic degrees, and many of them have passed through a good party school....

[Ye. Sosnin] Would you tell us, please, what principles of interrelationship have been built up between the Bureau and the Council of Ministers?

[I.I. Prostyakov] It would be more precise to say on what principles will be built up. Because, of course, an administrative restructuring is still taking place in this sphere. Our Bureau's work is very much different from the forms and methods of the activities of other USSR Council of Ministers bureaus, inasmuch as they are guided and supervised by sectors under union-level jurisdiction, as well as by the appropriate ministries.

The sphere of our Bureau's activities will include sectors whose supervision in the future will be concentrated, as I have already stated, in the union republics and in the localities. And so each republic, proceeding on the basis of its own sovereign rights, as well as taking into account the national traditions and specific, evolving conditions, will have the right to decide on its own matters concerning the development of its territory. Hence the approach to delineating the functions with the union

republics. Remaining within the sphere of our competence are all the issues linked to developing a scientifically grounded strategy for the country's social development and to implementing the necessary measures for strengthening the economy's social thrust.

But there is also quite a wide range of matters which are regulated by All-Union norms and provisions. Among them are pension insurance, wages, and the employment of the population, as well as price formation, etc. And, of course, with regard to all these problems we work in close contact with the republics.

There are also the kinds of issues where we function more in the role of coordinators. Let's take, for example, the division of labor between the republics in producing non-production types of consumer goods. Now this will all be decided in the localities. The advantage of such an approach is undoubted: local requirements will be taken into account better. Moreover, the local election organs will finally bear direct responsibility to their own voters for the state of affairs in the marketplace.

However, even within the framework of regional cost accounting there remains the problem of inter-republic deliveries. Because, after all, certain goods cannot be economically produced in every region, but rather at large, specialized enterprises. Here our Bureau can even function as a unique kind of intermediary.

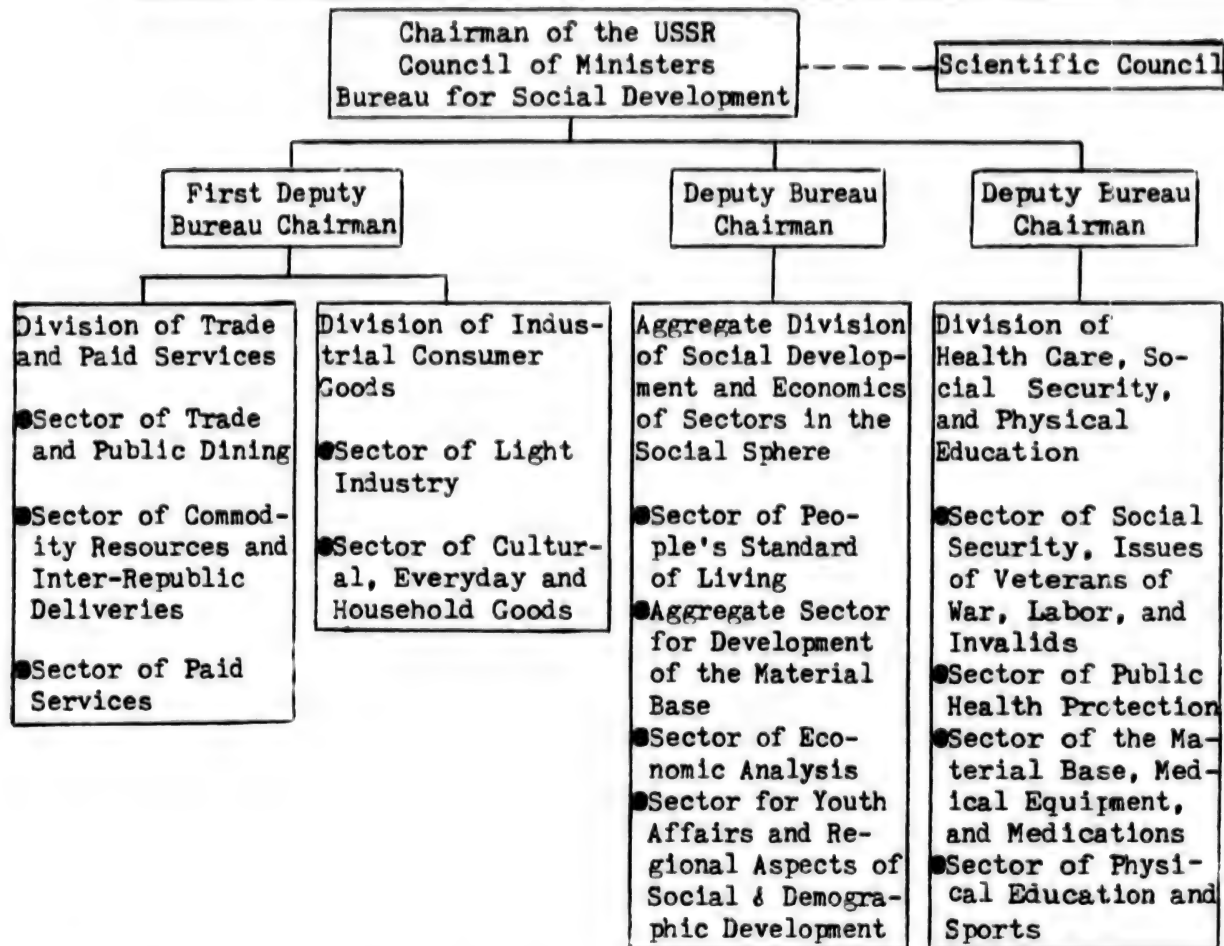
[Ye. Sosnin] The USSR Council of Ministers Bureau includes a Scientific Council. What kinds of problems does it solve?

[I.I. Prostyakov] There are many of them, but I would single out three. The first is to give the Bureau's leading officials, as well as other central organs, recommendations with regard to solving timely social problems, to help them stand back, albeit for a short time, from the mass of immediately pressing matters and to look into the future. A great deal of work was done, for example, on preparing a system of social norms; one of the most important tasks of which is the creation of an effective mechanism for a genuine departure from the residual principle for allocating funds for the development of the social and cultural sphere.

Yet another important task for the Scientific Council is to conduct scientific expertise regarding the prepared drafts on the most diverse issues. Thus, heated disputes arose during the discussion of the USSR Draft Laws on local self-government and local economy, on state youth policy, and on the USSR Archival Holdings, and quite a few valuable proposals were made.

And, finally, the third task. The Scientific Council includes scholars and practitioners with the most diverse fields of specialization and schools—jurists, sociologists, economists, engineers, journalists, social scientists, historians, etc. As a result, what is created is a truly unique opportunity to look into the problem being discussed

Structure of the Apparatus of the USSR Council of Ministers Bureau for Social Development



from its truly diverse aspects. Sometimes such unexpected facets are opened up that it compels us to look anew at that which had already come to seem usual.

But there are still quite a few problems in this council's work. Because, you know, it has really only begun to turn around in its work.

[Ye. Sosnin] The USSR Congress of People's Deputies posed quite a few sharp social questions which require urgent solution at the government level. What is already being done about this?

[I.I. Prostyakov] In recent times it has become somehow unsuitable to talk about major plans. Without any fear of provoking censure on this score, let me say that we are now preparing an entire series of just such large-scale plans by way of implementing the decrees of the USSR Congress of People's Deputies. This is dictated by the acuteness of the urgent social problems, when it is no longer possible to get by with any kinds of half-measures.

In particular, work is proceeding on a new pension law, a law on leaves, and a number of other legislative acts.

All these are draft laws, to which fundamentally new approaches are being taken. And, of course, to implement them, several tens of billions of rubles will be required. But we cannot economize any more on these matters.

A great deal is now also being done with regard to other thrusts of social policy. Let me cite just one example. In 1990, by means of redistributing the funds of the country's national income in comparison with those plans which have provided for this year of the five-year plan, an additional 60 billion rubles will be allocated for the current consumption by the population and for non-production types of construction.

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#### Marketing System Application In Light Industry Explained

18270136 Moscow TEKSTILNAYA  
PROMYSHLENNOST in Russian  
No 6, Jun 89 pp 13-15

[Article by S.N. Chuprygina, 1st deputy chief of the Main Administration for the Clothing Production

Industry of the USSR Ministry of the Light Industry, Moscow: "Development of a Marketing System in Light Industry")

[Text] The last issue of the journal contained articles dedicated to marketing problems within the branch. The Editorial Board is now discussing a marketing conference which was held in the USSR Council of Ministers (Bureau for Social Development). In this issue we are continuing to publish materials developed during this conference.

The new forms for economic management, the adopted USSR "Law Governing a State Enterprise (association) and the need for moving out into the foreign market and obtaining currency through the sale of finished products, that is, the operational forms under the conditions of self-support, are confronting the light industry with large tasks.

First and foremost are those questions concerned with the ability to engage in commercial operations, knowledge of the market, organizing the efficient movement of goods, managing a planned-financial economy, developing legal relationships with partners and others. The totality of the above-mentioned types of enterprise activity, directed towards satisfying effectively the population's demands, constitutes socialist marketing.

The goal of marketing in capitalist countries is that of preventing the market from being supplied with obsolete, low quality and unprofitable products that can only bring losses to a firm. The number of specialists in the marketing services of large firms is considerable. Thus there are 13,000 specialists working for the Mitsubishi firm who are concerned only with gathering information. They interrogate and test potential consumers, they study the products, catalogues and advertising of other firms, scientific-technical information and the press, they establish the prices levels for goods and they distribute free of charge their own advertising materials and catalogues. In addition, some of the firm's funds are expended for preparing various forecasts, for determining the potential market capacity and the categories for the possible consumers, their purchasing power and behavioral motives.

According to data supplied by our press, the total amount of expenditures for marketing in the U.S.A., Japan and Western Europe amount to 50 percent of the value of their output. Moreover, firms in the U.S.A. expend 1.5 percent of their commodity turnover for advertising.

The enterprises and organizations in our country's light industry are only beginning to concern themselves with the development and introduction of marketing. However, some of its elements (such as the study of demand, advertising and publicizing domestic goods) have been in use in the branch for a considerable period of time. Unfortunately, the expenditures for them are not very

great and amount to less than 1 percent of the commodity turnover of the company stores of USSR Minlegprom [Ministry of Light Industry].

Jointly with the trade and company stores, demonstration-exhibits and sales-exhibits are being organized, a study is being undertaken of true demand and consumer estimates and purchasing preferences are being obtained in connection with the assortment and quality of the goods being offered for sale. An analysis of the results obtained is being used during the creation of new products and the formation of production programs for individual enterprises. This is making it possible to solve the marketing problems for the goods of an individual enterprise or one region, but it is unable to achieve a balance in demand and supply for the country as a whole.

The technical re-equipping of enterprises carried out throughout the branch, the technological equipment purchased and the turning over of factories for operations require specialization and assortment reorientation for some enterprises and this results in a saturation of a regional market with some goods and the creation of a deficit for other types of goods. In addition, when studying the requirements for goods by groups, it is difficult to select the priority trends for technical re-equipping or to determine the required number or proper placement for production installations.

The technical re-equipping of enterprises, for example the sewing industry, raises the need for timely re-equipping and reorientation of enterprises of the textile industry. If this is not done, an imbalance will develop in the production of sewing products and in ensuring the availability of raw materials for such production. Thus, although we handed down a decision calling for the technical re-equipping of enterprises engaged in the production of men's clothing, we failed to ensure a timely supply of the needed raw materials for these enterprises. As a result, a shortage of worsted clothing fabrics developed at a fair for wholesale trading in fabrics, including that needed for ensuring licensed flows.

Thus the restructuring of the managerial system for light industry revealed a need, in addition to the planned-economic approach, to develop a planned-commercial trend for the operation of enterprises and also a need for creating a complete system for administering the branch under the conditions imposed by market relationships. Moreover, the new economic mechanism is creating definite legal and economic prerequisites for effective collaboration with CEMA member countries and individual firms of capitalist countries. This includes the creation of joint enterprises, the purchasing and sale of licenses, the presentation of credits for the technical re-equipping of the branch and also the entry of our enterprises into the international market. The effectiveness of such collaboration is dependent upon knowledge of the international market, its requirements and upon the ability to develop interrelationships on a commercial

basis. The existence of a shortage of products in the home market is a temporary phenomenon and the illusion must not be created that any goods can be sold here.

One direction to be pursued for improving administration is that of marketing. Today we have at our disposal only certain of its elements and a priority task with regard to administering industry at the union level is that of merging them into an overall system for the creation, production and marketing of products, developed based upon a thorough study of the market and the true needs of the consumers. Today we clearly understand that the correctness of the administrative decisions is dependent upon the availability of information on the market and the ability to use it.

Marketing can be employed effectively at an enterprise. The conditions for this are set forth in the USSR Law Governing a State Enterprise (association). However, the existence of a market deficit enables some enterprises to proceed in the absence of marketing and to realize profit in the process. Therefore it is difficult to assume that at the present time they are already beginning to invest money for the creation of a marketing system. As yet, this need is being experienced only by those enterprises which are striving to enter the foreign market.

It is important to recognize that at the moment the market becomes saturated with consumer goods a need will exist for a branch marketing system.

Within the USSR Minlegprom system, a definite amount of operational experience has been accumulated by enterprises and scientific organizations in the development and introduction of the elements of marketing. Practically all three levels for the administration of industry already have works in this area. Thus, a branch sub-system for the study and formation of the requirements and needs (OGS TNP) and a concept for developing an assortment are under development and work is being carried out in connection with forecasting and publicizing the styles and culture of clothing (VTsAMlegprom); a system is being created for controlling the assortment and quality of products based upon information on the market in the textile branches (TsNIILKA); a study is being undertaken of the principles involved in the development of demand and its effect upon changes in the prices and production volumes (Moscow Textile Institute imeni A.N. Kosygin); with the support of TASS, an information data bank is being organized for the purpose of carrying out marketing work (TsNIITellegprom); a system for supplying firms with information service on wholesale trade in raw materials and fabrics (VNIPIASUlegprom) has been developed and approved.

Very active work is being carried out in the light industry at the republic (territorial) level in the Estonian and Belorussian SSR's: a mechanism is being developed for the formation of programs for improving quality and for developing an assortment, including competitive products, based upon the use of a systematic approach (Belorussian Republic NOT [Scientific Organization of

Labor] Center); branch marketing is being created, within the framework of which a network of small enterprises and cooperatives is being developed. The organization of a wholesale trade center (PKB SU "Maynor") has been proposed.

Interest is being displayed in an experiment in the creation of small enterprises in Estonia, thus making it possible within the framework of administrative development to disrupt the monopolistic situation in the market (dictate of a producer), renew the assortment in a more flexible manner and develop a network of services, including for the use of marketing.

Some light industry enterprises, based upon their own problems concerned with the development and sale of finished products, have also commenced employing marketing elements in their trade-marketing operations. Thus the Lvov "Mayak" Production Sewing Association, in the interest of extricating itself from a financial crisis, began looking for new forms for organizing its operations. Following technical re-equipping, these enterprises concerned themselves with the problems of the market. During the first stage, a new system of logistical supply was developed, thus making it possible to reduce the number of raw material suppliers; joint work was carried out in connection with the creation of new types of fabrics and improving their quality. The second stage called for an analysis of the market, the operations of wholesale purchasers and the retail trade network. As a result of this work, partners were selected for participating in a complex of measures associated with the production-marketing activities of the "Mayak" Association and the products became competitive, thus enabling the enterprise to enter the international market.

In each individual case, the enterprises base their actions upon a specific market situation and develop their own marketing program for these purposes. Thus the "Slavutich" Industrial-Trade Footwear Association is solving its task of raising the competitive nature of its products by improving its production-marketing activities, while collaborating with Czechoslovakia and organizing cooperatives at kolkhozes for the production of intermediate products. The association is also developing collaboration with Italian firms in accordance with the following stages: improving the technology, developing an assortment and supplying goods for the market.

The operational results from utilizing the principles of marketing in the branch were examined by a section of the Scientific-Technical Council of USSR Minlegprom (September 1988) and during an all-union conference dedicated to marketing as the only system for the development, production and sale of light industry products and oriented towards satisfying the demands and requirements of consumers (December 1988). It was determined that a certain amount of work had already been carried out in this regard. However, the works have not been coordinated and require great financial expenditures and skilled personnel.

In evaluating marketing from the standpoint of its use in light industry, it can be stated that its introduction is advisable both at enterprises and in the branch. In a branch marketing system, an enterprise must be viewed as the principle element.

For ministries, under the conditions for their carrying out new tasks and functions, marketing will make it possible to realize a systematic approach in administering the branch's enterprises and for developing scientifically sound criteria for strategic administration and for validating policies in the area of investments, prices, assortment and professional orientation. Macro-marketing enables the ministries to substantiate a state order and to link together the proportion of a free market and a state order. In other words, marketing must ensure the functioning of the market mechanism under the branch's conditions. However, a number of problems the solving of which go beyond the bounds of one branch will be encountered along the path leading to the development and introduction of a marketing system.

The problems of the first group are associated with creating a system for administering logistical supply, production and the sale of products, which with the least amount of risk for production will be capable of taking into account, to the maximum possible degree, the requirements of the consumers. The most complicated problem is the creation of a mechanism for utilizing the results obtained from studying the requirements and demand for the purpose of adopting administrative decisions concerned with planning problems. This task can be solved jointly with USSR Mintorg [Ministry of Trade], with the closest ministry in terms of interest and under the direction of the scientific-research organizations of USSR Gosplan.

The second group of problems is associated with transforming a producer market into a consumer market.

The third problem—price formation. A need exists for developing a mechanism in which prices will serve as an administrative level and assist in the establishment of proportions between supply and demand. Ideally, USSR Goskomtsen [State Committee on Prices] should also utilize the marketing principle during the course of improving the price formation mechanism and coordinate this work with industry.

An important stage in the introduction of marketing into the operational practice of industry, particularly the selection of marketing channels, is the creation of an effective system for the movement of goods. USSR Mintorg [Ministry of Trade] should recommend the development of appropriate proposals and a methodological basis for streamlining this process.

In order to solve the problems of the first group, a need will exist for enlisting the aid of scientists from the Academy of Sciences and VUZ's and also workers attached to scientific-research organizations of USSR Gosplan, USSR Goskomtsen and USSR Mintorg, all of whom are in charge of corresponding operational areas.

The development of a marketing system in the state plan for important national economic problems should ideally be included for the purpose of financing them.

In addition to the above-mentioned problems, there are also information, technical and personnel problems. The question concerned with supplying information on the status and prospects for developing demand, the requirements of the population and consumers for light industry products arose some time ago. A branch system for the study and formation of the population's requirements and demand for consumer goods and services is presently under development. Sooner or later this system will expand its borders and become an information system for marketing.

The USSR Ministry of Light Industry already considers it necessary to confront USSR GKNT [State Committee of the USSR Council of Ministers for Science and Technology] with the problem of reorienting the work concerned with creating a national system for the study and formation of the population's requirements and demand for consumer goods into an information system for marketing.

The modern information service, including the service for studying the demand of enterprises and company stores, must process large volumes of information and this requires appropriate computing equipment which will ensure the creation of computer networks, data banks and packages of standard system programs.

The recommendation has been made to have the USSR Committee for Information and Computer Technology direct the work of supplying industry and trade on a mass basis with domestic technical equipment, since orientation towards the purchasing of computer equipment abroad is unrealistic.

The question concerned with supplying the services with personnel for studying demand and now marketing has been raised repeatedly at various administrative levels. At the present time, the specialists in this area are found mainly in VUZ's. It is recommended that the appropriate personnel be trained within the system of national education. The instruction centers could be branch in nature. Within our ministerial system, the proposal has been made to create such a center attached to TsNITEI-legprom. The system for improving skills must furnish appropriate assistance in this regard. A program for providing instruction in the principles of marketing in VIPKlegprom and its branches was approved and introduced into operations in the light industry in 1989.

In conclusion, it bears mentioning that despite a definite amount of work carried out in connection with the introduction of marketing elements, light industry is still in the beginning or organizational stage in this regard. We have prepared a draft program for introducing a marketing program, developed from the particular to the general, one which proposes the creation of individual elements of the system within the framework of NPO's [scientific production associations], since their structure

includes scientific subunits and production units. In some instances, the NPO's will open up their own company stores. As experience and methodological aids are accumulated, other enterprises of the branch, under NPO direction, will also convert over to operations under this system.

A binding element of the system must be all-system methodological works, the preparation of which will be assigned to VTsAMlegprom and the creation of an information data bank—TsNIITellegprom.

The draft program will be branch in nature and not call for links with other branches of the national economic complex and this will result in incomplete use of the marketing technology.

In commencing work concerned with the creation of a marketing system in light industry, USSR Minlegprom should enlist the assistance of allied ministries: USSR Mintorg, USSR Minkhimprom [Ministry of the Chemical Industry], USSR Ministry of Defense and the organs of logistical supply.

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## FOOD PROCESSING, DISTRIBUTION

### Fruit, Vegetable Processing Problems Impede Baby Food Production

#### Interview With Plant Manager

18270150 Minsk SELSKAYA GAZETA in Russian  
14 Jun 89 p 2

[Interview with Ivan Denisovich Kamenetskiy, manager of the Malorita Vegetable-Drying Plant, by SELSKAYA GAZETA special correspondent V. Nikolaychuk: "The Adult Problems of Feeding Children"]

[Text] Spring and the beginning of summer are the time for avitaminosis. And for that reason, no matter how much the newspapers frighten us with nitrates and nitrites, even those who are most concerned about their own health cannot pass by the first green cucumbers or bunches of rosy radishes. Not that we adults are not accustomed to risking it. But there are few volunteers who can be found to expose the health of their young children to danger, it appears. Seldom will any parents agree to give their children vegetables and fruits when their quality is in doubt. Unfortunately, there are fewer and fewer products that are completely safe in our time.

Infants in the first year of life need vitamins especially. Let us say frankly: the vegetable products in our stores, especially from cooperatives and private individuals, are not fit for them. Under the current ecological situation in the republic, as well as because of the lack of facilities to monitor chemicals and radiation, there is no certainty even about the quality of vegetables and fruits that we grow with our own hands. So what is the solution? It is

the only one, although it must be admitted it is not a reliable one either: canned fruits and vegetables produced by our industry especially for children.

But this is in theory, as they say. But in practice? In order to buy 10 small cans of carrot juice for your 4-month-old daughter, you would need 2 weeks of persistent search for it in the capital's food stores and no less active assistance from parents and friends throughout the republic. Apparently the shortage of this product is also explained by the deplorable fact that there is not one store specializing in baby food in any Belorussian city. After all, there is nothing to sell in them, frankly speaking. Realizing that it is customary to divide shortages into permanent and temporary ones these days, I decided to find out which of these groups vegetable and fruit "baby food" would be put in by Ivan Denisovich Kamenetskiy, the manager of the Malorita Vegetable-Drying Plant, whose labels appeared on the cans of carrot juice that had been obtained with such difficulty.

"Unquestionably, the permanent group," he said. "At least for the next 5 to 10 years we will not resolve this problem, with the current attitude toward it. Or even 15 years."

You would not consider Ivan Denisovich a pessimist. And for that reason, an answer such as this was a complete surprise to me.

[Nikolaychuk] Should we understand from this that demand is increasing but production remains as before?

[Kamenetskiy] No, fortunately. This year our plant alone is planning to increase production of canned baby food by a million standard small cans. A standard small can is roughly one and a half of the standard 250-gram cans. If it is taken into account that we have turned out 2.5 million before this, the increase is substantial.

[Nikolaychuk] So what's the reason for the pessimism?

[Kamenetskiy] Awareness of reality. Let's look at the mathematics! How many children do we have in the republic that are less than 6 years old? About a million—no less. How many cans are needed per year for each of them? About 100. If we multiply 100 by a million, we get 100 million. But what is industry offering today? From our plant, 3.5 million standard small cans, and about 10 million from the Kletsik plant, which is the basic producer of children's vitamin-rich food in the republic, incidentally. The solution, in my view, suggests itself. This is a rough picture, of course, but I think it reflects the heart of the problem.

[Nikolaychuk] It is even sadder that a vast amount of your output is simply wasted. Judge for yourself. One teaspoon of carrot juice daily is recommended for an infant of 4 months, as an example. After the can is unsealed it can be stored in a refrigerator for no more than a day. Hence, out of 250 grams of juice, and this is the way it is usually packaged, only 15 to 20 grams are used. The rest is wasted. A 1-year-old child can drink just

half a can in a day. Does this mean surpluses when there is a shortage? Even simply by putting the juice in 100-gram containers, we might be able to reduce the shortage by more than half without increasing production.

[Kamenetskiy] This is the way they do it in other countries, incidentally. It is not technically difficult to do it here, too. But where do we get the containers and the lids? We have enough problems even with the current ones, you know. Although it is a sensible suggestion, of course, and it deserves the attention of planning organs. But there will be no holdup for us.

But this is a matter for the future. And there are more urgent problems. I will say frankly: as the manager of a plant, I would refuse to produce carrot juice for infants today if I had my way. Why? Because it is not profitable for the enterprise. Well, is it really fair that "children's" carrot juice, which is more complicated to produce than "adult" juice, and more labor-intensive besides, costs less? Such a disproportion in the conditions of cost accounting, you will agree, do not provide incentive to develop its production.

[Nikolaychuk] I understand you as a manager, and I want you to understand me as a father. Other parents would also pay that difference of 4 or 5 kopecks without hesitation for a good, quality product, I think. Just as long as they do not have to run from store to store in vain.

[Kamenetskiy] I do not doubt this. And I believe that contract prices could provide certain incentive for economic managers to increase the production of children's canned foods. However, we do not have the right to set the prices ourselves. Incidentally, this is one of the reasons why the profitability of nearly all the state vegetable-processing enterprises is low in general. Purchase prices are rising nearly every year, but retail prices remain at the same level that was set many years ago.

The clinched lids for baby food is also a problem. It seems like a minor thing. But this is at first glance. We are just about to begin the procurement season, and we are about 3 million units short of them, that is, out of the 5 million we need, we have concluded contracts for just 2 million. Why? Simply because it is not profitable for enterprises to produce them: they are labor-intensive, they require special metal and a double coat of lacquer, and with all that they are not expensive. So suppliers are trying to get out of concluding contracts by various pretexts. Cost accounting and self-financing are forcing each one to think about his profit.

Well, lastly, this is a tremendous responsibility for product quality. After all, this concerns children's health. You will not believe it, but I even slept poorly during my first years as a manager because of this baby food.

[Nikolaychuk] And now? Incidentally, since the conversation has turned to quality, tell me who is right, just the same: the wife or the mother-in-law. The former thinks it

is better to feed her daughter your canned foods, assuming that she can buy them somewhere, of course, and the latter thinks that it is more reliable and sterile to prepare the juice herself, grating and wringing it out.

[Kamenetskiy] The wife is right, just the same. And I do not say this for reasons of professional honor at all. The raw material at the plant undergoes obligatory chemical and radiation monitoring, then it is mechanically cleaned twice, automatically and manually, and processed with heat. In addition, the juice is diluted with a special sugar syrup, reducing any concentration of nitrates. The mother-in-law's procedure, as you see yourself, is inferior to ours.

[Nikolaychuk] As far as I understand, nitrates still are getting into canned baby foods. And how many of them are there?

[Kamenetskiy] The sanitary standard is 200 milligrams per kilogram of the product. I am sure that it is recognized that it is still too high. Several years ago this standard was three times lower. Though at that time the production line for carrot juice had to be stopped: the concentration of nitrates in it had exceeded the norm, in spite of all our efforts. So it was raised for us, not from good living, as they say.

But in any event, the production of a clean product depends least of all on us. The important thing is the raw material. For example, by making a profit on canned apples, we have been able to increase the purchase prices for quality apples. We cannot allow ourselves to do this with carrots, for the reasons I mentioned previously. For this reason, the kolkhozes are not interested in improving their quality. But the method of persuasion these days is, alas, operating poorly. Moreover, both the shortage and the lack of healthy competition are not compelling our enterprises to fight for a quality product.

[Nikolaychuk] Which is to say that the conversation with Ivan Denisovich turned out to be a sad one. And the samples of canned baby food which the manager displayed when we parted were not, alas, a pleasure to the eye. Most of the mothers and fathers will only dream about them, as before, after all. It only remains to be hoped that the republic Gosagroprom [State Agroindustrial Committee] will be able to break this vicious circle.

### Gosagroprom Official's Response

18270150 Minsk SELSKAYA GAZETA in Russian 19 Sep 89 p 2

[Response of G. Smirnov, deputy chief of the Main Administration for the Production, Procurement, and Processing of Fruit and Vegetable Products and Potatoes of the Belorussian SSR Gosagroprom, to SELSKAYA GAZETA article of 14 June 1989: "The Adult Problems of Feeding Children"]

[Text] The Main Administration for the Production, Procurement, and Processing of Fruit and Vegetable

Products and Potatoes of the Belorussian SSR Gosagroprom has examined the article "The Adult Problems of Feeding Children" published in SELSKAYA GAZETA on 14 June 1989.

The small quantity of canned fruits and vegetables for children being provided for the population is linked first of all with the shortage of production capacities for them (the capacity as of 1 January 1989 was 12.7 million standardized cans (MUB), and 13.1 million standardized cans were produced in 1988).

The BSSR Gosagroprom is taking steps to improve the supply of canned fruits and vegetables for children to people in the republic. This year, through specialization of the Malorita Vegetable-Drying Plant and the organization of production in 3-liter containers for preschool children's institutions at the Kletsk Canned Goods Plant, the output of them is being increased by 2.9 million standardized cans, or 22 percent, compared with 1988. In addition, 4.1 million standardized cans are being brought in from outside the republic and through imports. As a whole, the steps being taken will make it possible to increase production of the items indicated by 40 percent.

In the long term, in conformity with the decree of the Belorussian Communist Party Central Committee and the BSSR Council of Ministers, it is planned to introduce capacities to turn out canned goods for children in the amount of 39 million standardized cans, including 27 million through the construction of new shops in the cities of Polotsk, Zhlobin and Mosty, and 12 million with renovation of the Kletsk Canned Goods Plant.

A manufacturing plan for technical re-equipment of the Kletsk plant is being developed and technical documentation for construction of the Polotsk Canned Goods Plant is

being prepared at present by the "Sevzapgiropishcheprom" Institute. The introduction of new production capacities will make it possible to meet the public's demand for the food products needed.

In accordance with a government decision, the prices for canned fruits and vegetables, including those for children, will be determined by the suppliers and consumers under an arrangement between the sides beginning on 1 January 1990. This will enable enterprises to compensate for the actual expenses in producing canned food for children and thereby increase the incentive to produce them.

With the aim of organizing the output of ecologically clean food for children, specialists from oblast agroproms and the BSSR Gosagroprom have been traveling to enterprises and farms. A list has been made of the farms delivering raw material to the enterprises producing the children's canned food. Thus, the entire supply of carrots needed to produce canned goods for children will be delivered to the Kletsk Canned Goods Plant by the "Tucha" Sovkhoz where the fields have been selected for seeding, taking the best ones previously used into account, the soils have been limed with dolomitic meal, and arrangements have been made for fertilizer application. It is planned to combat the weeds by agricultural technology methods which exclude the application of all types of herbicides.

The processing enterprises will have significantly tougher input inspection of the nitrate content in the raw material delivered, and inspection of the residual content of pesticides will be carried out by the oblast SES [sanitation and epidemiology stations] under a contract with the enterprises.

## FUELS

**Use of Scientific Achievements in Petroleum Production Examined**

904E0001A Moscow NEFTYANOYE KHOZYAYSTVO  
in Russian

No 8 Aug 89 (signed to press 19 Jul 89) pp 4-8

[Article by Ye.M. Dovzhok, head of the Main Scientific and Engineering Administration of USSR Minnefteprom [Ministry of the Petroleum Industry]: "Scientific and Engineering Progress in Oil-Recovery Operations"]

[Text] The USSR's oil industry is a highly industrialized branch of the national economy. It includes a large complex of mutually related spheres of material production—prospecting and exploration for oilfields, the construction of exploratory, production and injection holes, the operation of oil and gas fields, the preparation and transport of crude, the treatment of casing-head gas, and so on. The branch has as its disposal a developed raw-materials base, the required inventory of wells, a high-capacity base for supplying production equipment, a network of scientific-research and design institutes, and a collective of many thousand specialists.

The modern era of the country's oil-industry development is marked by an accumulation of problems whose solutions will require enormous material and mental resources. In the last 15-20 years, intense and unfavorable changes in the structure of our oil-reserves have occurred. The share of highly productive reserves, which have provided about 90 percent of nationwide oil recovery, fell by half between 1960 and 1985.

Poorly productive fields with difficult climatic and geological-engineering conditions and small reserves (fields with high-viscosity oils, with gas-and-oil deposits, with deep-lying hydrocarbon-containing deposits, and so on) will be drawn into use in the near future.

The branch cannot operate effectively without the wide use of scientific and engineering achievements and of scientific and engineering progress in production. Exploration, development, recovery, and preparation and transport of oil and gas under nontraditional conditions will require the solution of many scientific and engineering problems.

The effect of the adverse factors on geological-exploration effectiveness is being reduced mainly by raising the level of scientific validity of the areas being prospected, reequipping and methodologically improving geophysics in the field and at oilfield facilities, and improving the equipment and technology for drilling. Study of the processes of the formation and consistency of distribution of oil and gas fields, based on data for large regions and taking into account a quantitative assessment of the prospects that they bear oil and gas, and geological and economic assessments of

the resources are being planned, particularly for substantiating and choosing the most effective areas for geological exploration.

With the creation of new and the improvement of existing prospecting methods, the basis of which will still be seismic exploration, solution of the following geological tasks is called for:

- a rise in the precision and validity of deep structural configurations with a great degree of resolution of seismic recordings throughout the whole time section, with a view to excluding completely the data of deep-drilling data in solving structural tasks; and
- prediction of the geological cross-section for a stratigraphic and lithological breakdown thereof, in accordance with the geophysical data, and the direct prediction of hydrocarbon deposits and contours of the presence of oil and gas and of AVPD [anomalously high formation pressure] areas; and optimization of the distribution and a reduction in the number of prospecting, exploratory, and production holes.

In the area of geophysics performed at oilfield facilities, technological and economic tasks will be resolved by increasing the geological effectiveness of GIS [downhole geophysical research] during prospecting and exploration and while preparing the oil and gas deposits' computed parameters. An increase in GIS effectiveness at fields being developed and the creation of a valid informational base for regulating the processes of optimal working of the reserves and increasing oil recovery also are called for.

The development of geological science, the application of its results to geological-exploration practice, and a rise in the engineering level of geophysical research and of well construction are being realized in the form of an additional growth of oil reserves in the 13th Five-Year Plan. The effectiveness of geological exploration for oil will be increased by 30 percent in the branch.

Waterflood systems created by domestic science are being used widely in oilfield development. They include:

- the development of wide subgas zones of oil and gas deposits, with the use of a two-sided barrier, and area waterflooding and modifications thereof for West Siberia's fields; improved technology for intermittent (cyclic) waterflooding with change of direction of the filtration flows at fields in West Siberia, Tataria, Bashkiria, the Ukraine, and so on; and
- the technology of stepped thermal flooding at fields in Kazakhstan and so on.

Waterflood effectiveness at fields being developed is being increased on the basis of a detailed analysis of the working of reserves, by optimizing hole siting and the separation of facilities, stimulation systems, and waterflood technology. It is planned to get about 42 million tons of crude in 1990 and more than 180 million tons during 1986-1990 through these measures.

The use of the various flooding technologies will enable the reserves to be worked at an accelerated pace and will double the recovery factor over that obtained based on natural development patterns.

During the 12th Five-Year Plan one of the priority directions of scientific and engineering progress in oil-recovery has been the creation and large-scale introduction of modern methods for increasing formation productivity. With a view to concentrating scientific and production efforts in this area, the country has created the interbranch scientific and engineering complex Nef-teotdacha.

At present, 10 percent of all the world's oil recovery is being conducted in the USSR through the use of new methods. Special attention is being paid to the development of thermal and gas methods and to polymer flooding. Thermal methods are the ones most ready for industrial application. Base systems for development, with energy-saving technologies founded on a combination of thermally stimulating the formation and water flooding (Thermal Fringes), have been created. Their use requires 1.5-fold to 2.0-fold less power consumption than was required prior to conversion to the combined technologies. In this case, oil recovery is not reduced and in many cases it is even increased. Almost half of all the oil recovered in the country through new methods is being extracted from fields where thermal methods are being used. The USSR occupies a leading place in the world in oil recovery by hot-water injection and by in-situ combustion.

Unjustified delay in developing gas methods has led to the fact that, even by the middle 1980's, not one of the technologies prepared for large-scale industrial application had panned out in practice, and delay even in creating the technical resources for realizing these methods has been observed. In this connection, it is planned to master about 20 technologies, including that of injecting nitrogen and stack gases into the formation. In addition to the known directions, there is an original one—the intrastratal generation of carbon dioxide and of stack gases through microbiological, oxidizing and other processes that occur in the formation. The promise of this area has been confirmed by eight years of test work at the Gnedintsevskoye field of the Ukrainian SSR.

The Soviet Union, together with the U.S., is the leader in the use of polymer flooding. As for other physical-chemistry methods, the prospects for obtaining the light oil that remains after flooding has been associated with them for many years, in particular with the injection of PAV's [surfactants] and their compositions into the formation. However, neither in the USSR nor abroad are there, so far, effective economically acceptable technologies. Therefore the emphasis has been placed on expanding research, including research that involves modern achievements of biotechnology. At the same time, PAV's and compositions based on them are being used increasingly widely for PZP [bottom-hole treatment].

The theoretical and technological bases for the methods of vibration and wave-stimulation in the reservoir and for PZP methods are being developed. Industrial-scale testing is planned for the branch's fields in 1990.

At present, all possible ways for reducing total expenditures on realizing these methods must be sought and studied. As was noted at the Fifth European Symposium in Budapest (1989), given the modern economic situation, "it is necessary to improve the processes and to understand their mechanism and the most important characteristics with a view to further optimization, and to search systematically for the possibilities of an amalgamation of new methods for increasing formation yields with the technologies that use horizontal wells, and to extract maximal advantage from the price scales for output. Moreover, constant monitoring of development of the prime cost for recovering crude must be provided for."

The effectiveness of introducing new technologies aimed at raising oil recovery is determined in accordance with data about the initial state of the reserves of crude and monitoring of the working thereof. In order to get this data, hydrodynamic and oilfield-geology methods of studying the wells and the formation that provide the necessary information are being used. Monitoring methods are being improved as new problems arise, which are connected with deterioration of the structures of reserves of fields that are under development or are being introduced anew.

Fundamental research on solving the practical problems involved in creating methods, technologies and equipment for the study of wells is being done systematically.

Methods for studying wells and formations during the filtration of multiple-component mixtures (crude and gas, and crude, gas and water), for studying the filtration properties of reservoirs of complicated structure (double porosity, complicated bedding, and anomalous thicknesses), and for monitoring the working of formations, using hydrodynamic, thermal and physical-chemistry stimulation, have been developed since the 1970's. These methods are needed for studying anomalous fields: the Salym, Tengiz, Usa, Karazhanbas, Kharyaga and Samotlor.

A new basic complex of studies for monitoring the development of oilfields that differs considerably from the existing complex has been completed and prepared for introduction. It was made up to take into account peculiarities of the problems of monitoring development with thermal and physical-chemistry stimulation methods. It regulates validly the types and periodicity of surveys of all categories of wells of the recovery inventory for the various stages of oilfield development. The new complex envisions the possibility of reducing the volume of certain types of deep studies by a concentration thereof in a keyhole network. It is planned to complete later the development of methods for evaluating the economic effectiveness of technological and

equipment solutions aimed at increasing the informativeness, precision and reliability of the studies.

In order to introduce the new methods for studying oil wells and formations, the development of technical resources that are designed for extreme conditions of temperature and pressure and for stable and aggressive environments will be completed in coming years.

Testing is planned of the organizational and technological system for monitoring and regulating oilfield development, based on a comprehensive study of wells and formations and on the integrated stimulation of formations by modern methods of increasing oil recovery. The method calls for methodological and algorithmic support for the long-term management of the development, analysis and planning of recovery, and also for computer equipment for gathering primary information and for the automated processing thereof.

A complicated and vast program for improving the equipment and technology for oil and gas recovery is now being implemented in the oil industry. New types of equipment for the mechanized operation of wells—submerged electrical diaphragm and screw oil-well pumps; long-stroke deep-pumping installations and bottom-hole oil pumps with long strokes of 3, 5 and 6 meters, in normal and corrosion-resistant versions; and submerged electrical centrifugal pumps in a modular version, including pumps that are corrosion-resistant, with the use of gas separators for the operation of wells with high gas content (up to 50 percent), increased yield (50-1,250 m<sup>3</sup>/day, increased head of 2,000-850 meters, and so on—are being introduced. Fourteen types of oilfield equipment, including washing units, units for repairing and servicing oilfield equipment and for mechanizing labor-intensive work in recovery and during the workover of wells, have been modernized. Fluid-operated subsurface pumps with a yield of 250 m<sup>3</sup>/day at a pressure of 14 MPa and TsNS [central pump-station] type pumps for injecting water into formations, in a corrosion-resistant version with a service life of up to 20,000 hours, have passed industrial testing.

The large-scale introduction of mechanized wells and the installation of new equipment for converting wells to mechanized recovery have enabled the time between workover off wells (MRP) to be increased greatly. Thus in 1988 the overall MRP for the branch as a whole increased 1.55-fold over 1980. With the sharp increase in the proportion of mechanized wells, labor intensiveness for servicing them is being reduced. While this figure for the branch was 1.6 men per well in 1980, it was 1.35 men per well in 1988.

The reliability and longevity of the types of equipment in use are being increased and new equipment is being introduced, particularly outfitted-module automated compressor stations with electrical and gas-turbine drives; outfitted-module pump stations for injecting formation and fresh water; outfitted-module automated pump stations with productivities of 1,000, 3,000 and

6,300 m<sup>3</sup>/day, with control based on microprocessor equipment, and so on. In the area of the gathering and treatment of casing-head gas, outfitted-module automated industrial lines for treating the crude and for treating and scrubbing gas, and small modular automated installations for preparing and treating casing-head gas are being introduced, membrane technology for separating gas into components is being created and introduced, and so on.

Thus, the main task for scientific and engineering progress in the oil-recovery industry is that of providing for a radical increase in effectiveness of the functioning of all its subsystems, based on an accelerated improvement of operating processes and equipment. It should be emphasized that a special task of a unified scientific and engineering policy in the modern era is that of searching for the practical introduction of fundamentally new achievements of basic science in such areas as high-temperature superconductivity, laser technology, including high-energy, plasma and membrane technologies, the use of high-strength ceramics and composites, and so on. Use of the indicated achievements should revolutionize production processes at the dividing-line of the 20th and 21st centuries, but it is necessary to get ready for this in the modern era.

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### Specialist on Horizontal Well Drilling Program

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No 6, Jun 89 pp 36-37

[Interview with BashNIPIneft [Bashkir State Scientific-Research and Planning Institute of the Petroleum Industry] Deputy Director for Drilling, Doctor of Technical Sciences Professor Nurulla Faritovich Kagarmanov, by journalist Elvira Kunakbayeva: "The Future Lies in Horizontal Wells"]

[Text]

[Kunakbayeva] It is well known that you, Nurulla Faritovich, have long been advocating the drilling of horizontal wells, and long-term operations according to a state order were started last year. What can be provided from the drilling of horizontal wells?

[Kagarmanov] Yes, I have long had an interest and continue to have an interest in this problem. I took part as a young specialist in the drilling of multiple-bottom wells with horizontal offshoots on the Kartashev Field in 1953. Some 35 years have passed since then, and a wealth of material has been assembled on horizontal drilling around the world. New ideas have been born along with new principles of technology. But today the technology of oilfield development using horizontal wells and the creation of development systems is important aside from drilling technology alone.

[Kunakbayeva] What contribution can the new method make?

[Kagarmanov] I am profoundly convinced that we can markedly intensify the process of oil extraction and raise the petroleum return from formations with the aid of horizontal wells. The realization of this method, by way of example, will be comparable in significance to the assimilation of the method of developing oilfields by maintaining stratal pressure via the injection of water, the foundations for which were laid at the Tuymazy Oilfield.

But both the theory and technology for the running of horizontal wells, like the technology of oilfield development, has as yet been insufficiently researched. There has been no systematic research as yet. Work has begun only this year on the comprehensive Gorizont program approved by the USSR Ministry of the Petroleum Industry. They began to be occupied with this problem abroad in the early 1980s, and now quite a bit of experience has been accumulated around the world in drilling horizontal wells—hundreds of them have been drilled, even thousands with a short length of the horizontal portion (less than 70 meters). More than 40 foreign firms are engaged to this or that extent with running horizontal wells. One firm in the United States, for example, is running horizontal wells using special flexible pipe. The Horvell firm in France has been operating successfully in this realm since 1984.

The accumulated knowledge and experience is making it possible to draw conclusions that confirm the opinion of scientists and practitioners that horizontal wells provide for an increase of many times in the current yields of wells. There are cases where yields are 2 to 100 times higher than for vertical wells, and figures of 4-15 times are most often encountered. It is asserted in an article published in the journal PETROLEUM MANAGING that one horizontal well replaces five vertical ones for a homogeneous formation, and the ratio could reach 1:20 with a regard for the non-homogeneity of the formation. This is confirmed by our own research as well.

Five years of operating experience of four horizontal wells at the Rospo-Mare field (Italy) make it possible to conclude that the efficiency of the displacement of oil by water is considerably higher for horizontal wells. Another author writes that horizontal drilling is nothing new, that much in the development of this technology was done as early as the 1950s and 1960s, chiefly in the USSR. And that really is so. We have drilled about a hundred and fifty horizontal wells in this country, of which almost a quarter are in Bashkiria, and the scientists of BashNIPIneft have made no small contribution to this cause: research has been done and a number of plans for the construction of horizontal wells and their development have been executed. They include technical and economic substantiation for the development of reef fields, a plan for the development of the Yuzhno-Vedeno field, a plan for the shaft development of the Ishimbay field and dozens of plans for the construction of wells that could be used today.

The solution of the problem of running horizontal wells should provide for a breakthrough in oil-production technology, radically altering the system of oilfield development.

But I feel that the attitude of some of our specialists toward this matter today does not correspond at all to the prospects that this method opens up for raising petroleum recovery. And such an approach is of course impermissible, since it is a drag on an important and much needed matter.

[Kunakbayeva] You have cited a number of facts testifying to the advantages of drilling and operating horizontal wells. But every method has its advantages and its drawbacks, its difficulties...

[Kagarmanov] There are two methods of running horizontal wells today—from shafts and from the earth's surface. Both methods have their advantages and disadvantages, their specific features.

It seems to me that horizontal drilling should be considered a special, independent type of construction of oil wells. There are many serious unresolved scientific and technical problems here. We do not as yet have any specialized tools or equipment.

[Kunakbayeva] And what can we expect of horizontal drilling in the way of raising oil recovery?

[Kagarmanov] The significance of the horizontal method of oilfield development increases compared to conventional ones for high-viscosity oils in particular. The following general law has been established: whereas the petroleum recovery of vertical wells totals 10 percent, it reaches 30 percent for horizontal ones. And when heat stimulation is applied to the formation through horizontal wells, petroleum recovery can even reach 60 percent. These indicators are confirmed by the experience of shaft production. Petroleum recovery at the Yarega field in the Komi ASSR was just 2 percent through vertical wells, while the horizontal wells, using steam stimulation, already now total over 34 percent. Horizontal wells were drilled from mine shafts there. But the construction of mines at depths greater than 300 meters is extremely dangerous for the personnel and will thus hardly find widespread application. The reference point today is thus basically the construction of wells from the earth's surface. The drilling speeds are 1.5-2 times slower, and the cost is so many times greater herein—the lack of experience and technology is having an effect. A most important part of the problem has moreover not been solved—there are not enough precision monitoring systems for the spatial positioning of the well shaft so as to drill thin seams (3-5 meters). There is as yet no series-produced equipment for geophysical research of wells. We must work on all of these problems, since the advantages of this development method are undoubted, and they can be considered as an increase of many times in field density with considerably less spending. This is very advantageous, especially for tertiary and subsequent stages of post-development; they

also have great ecological advantages, since they reduce markedly the sites of possible pollution, which merits particular attention.

[Kunakbayeva] Nurulla Faritovich, what is being done at the institute to solve these problems?

[Kagarmanov] A mathematical model for the spatial bending of inclined and horizontal wells has been developed at BashNIPIneft that is based on a regard for all deflective forces, including elastic forces of resistance to deformations of the drill string. A physical law of well bending in drilling as expressed by the variational principle has been found. Mathematical equations for controlling well trajectory have been developed on the basis of these results that make it possible to obtain a projected trajectory and a control program for the assigned parameters. A new model and technique for calculating the technological indicators for the development of oil and gas fields using horizontal and multiple-bottom wells in non-homogeneous collectors, a controllable deflecting wedge and a series of designs for bottom-hole tools have been developed, and there are original technical solutions for short well-bottom motors and ball and chain bits as well.

We must first of all do some work on drilling horizontal wells using existing equipment and tooling. The method of electric drilling is most suited to this.

The institute has executed some plans for the construction of wells from the surface with the gradual gathering of curvature to a horizontal shaft running along the producing seam for the required distance.

We feel that we must also develop and incorporate a technology for drilling laterally inclined and horizontal drainage wells from worked-out operational wells of conventional diameter. Here the return will be obtained at once.

And finally, it is necessary to begin being occupied with promising directions without delay. The staffers at BashNIPIneft have proposed a new approach to the problem and have formulated the concept for drilling horizontal wells of small diameter using bottom-hole robotized drilling apparatus (drilling robots). The basic process system for realizing the new method has been developed, and the preliminary values for its principal parameters have been substantiated.

Proceeding from our own domestic experience, I can say that it is necessary to organize a special design bureau for horizontal well drilling in order to speed matters up. Experimental enterprises and testing grounds and well and drilling-robot jigs are needed. All of this will accelerate to the utmost the development and incorporation of special tooling for drilling horizontal wells along with equipment for monitoring and controlling trajectory.

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### Improving Oil Sector Geophysical Work

18220155 Moscow NEFTYANOYE KHOZYAYSTVO in Russian No 6, Jun 89 pp 3-7

[Unattributed article under the rubric "At a Session of the USSR Minnefteprom Collegium": "Raising the Efficiency of Geophysical Operations and the Quality of Field Development Preparation"]

[Text] The collegium of USSR Minnefteprom [Ministry of the Petroleum Industry], in assigning especial significance to providing the sector with a solid raw-materials base, considered a number of questions associated with raising the efficiency of geophysical and geological operations.

Reports were presented by Glavneftegeofizika [Oilfield and Field Geophysics Main Administration] and the Soyuzmorgeo [State Marine Geological] PO [Production Association] on the state of marine geophysical research. It was noted that steps are being taken to raise their efficiency: the production subdivisions are being re-equipped with new computer equipment; the thrust of scientific-research and experimental-design work toward the creation of modern equipment for marine geophysics is being strengthened; and, new economic methods of management and administration are being actively put into effect.

The Soyuzmorgeo Association, conducting geophysical operations on the continental shelf of the USSR as well as on a contract basis in some socialist countries, is basically providing for the preparation of promising sites for deep exploratory drilling in the necessary volumes. It has at its disposal the essential production base and includes four territorial production geophysical trusts, an NII [scientific-research institute] for marine geophysics and auxiliary subdivisions. The trusts include 27 scientific-research vessels of various classes equipped with on-board navigational and geophysical systems for performing operations.

Seismic survey using the reflected-shooting method from a common depth point, primarily with 48-fold accumulating, is widely employed for resolving geological tasks. The materials from marine geophysical research are processed by three computer centers.

The volume of geophysical work performed by the association doubled over the 11th and 12th Five-Year Plans, while the quality of research went up and the circle of tasks being resolved by seismic exploration expanded at the same time. The incorporation of new technologies and equipment in the recording and processing of seismic data has made it possible to forecast the geological sections and uncover zones of overpressured formations. Detailed spatial seismic-exploration operations have been started at the stage of field prospecting. About 550 structures have been delineated, of which 160 with a prospective area of 30,000 square km

[kilometers] have been prepared for drilling. The success rate for opening up the fields exceeds 80 percent. The individual developments of the NII for Marine Geophysics that were recently completed are also facilitating an acceleration of scientific and technical progress. A series of piezoseismographic bar has been created, the development of a new generation of pneumatic emitters is coming to a conclusion, the 96-channel Volna seismic station has been built in cooperation with Hungarian organizations and a starting package of programs for processing the data from seismic survey operations has been developed.

It was noted at the collegium at the same time that material drawbacks exist in the activity of Soyuzmorgeo and the subdivisions under it. A considerable lag in the processing of materials obtained at sea (up to 1-1.5 years) is observed as a result of the acute shortage of computer capacity for interpreting the data of the constantly growing volumes of marine seismic survey operations, the quality and detail of processing are dropping and, as a consequence, geological information is being lost. The lack of compatibility of the computers being employed does not permit a concentration of the efforts of interpreters in creating a unified system for processing marine geophysical information.

The orientation of past years basically toward the use of imported geophysical and navigational equipment has led to a weakening of domestic development. The sectors do not have enough modern types of seismic bars, pneumatic emitters or seismic recording gear. A difficult situation has taken shape with the supply of navigational equipment. There is insufficient equipment for operating in shallow waters, especially at depths of less than two meters. The corresponding projected volumes of operations in the shallow waters of the Pechora Sea, the northern Caspian or the Sakhalin Islands are not being performed due to this, as well as to poor organization. Operations on Kolguyev Island, which were envisaged in the measures approved by USSR Minneftprom to strengthen geological-survey operations in that region, have not been organized.

Too little attention has been devoted to the development of geophysical operations in the Caspian, principally in the marine oil-producing region. The Kasporneftegeofizrazvedka [Caspian Sea Petroleum Geophysical Survey] Trust is poorly set up, equipped with outmoded marine equipment and seismic-survey gear and has a small computer center. Spatial seismic-survey research, of especially great significance in that region, is as yet not being conducted.

The utilization factor of scientific-research vessels is too low due to the poor organization of operations and large losses of productive time during the organizational-dissolution period and in bunkering.

Economic work is not being conducted efficiently enough and there is effectively no standards-research group in the Soyuzmorgeo PO, so profound analysis of

the economic activity of each production subdivision for the objective setting of long-term standards for them is not being performed.

The Gelendzhik SMU [Construction and Installation Administration] is operating poorly. The plan for construction and installation work was only 48-percent fulfilled in 1988, and the start-up of housing in the city was disrupted.

Glavneftegeofizika, which the marine geophysical service has been part of since February 1988, has taken steps to accelerate the technical re-equipping of the subdivisions in the Soyuzmorgeo PO and has allocated the essential computer equipment. The Seysmotekhnika [Seismic Equipment] NPO [Scientific Production Association] has been brought in to create modern pneumatic emitters, as has the Saratov SP [Seismic Detector] SKB [Special Design Bureau] to create seismic-survey apparatus. The Neftegeofizpribor [Petroleum Geophysical Instruments] NPO has been created in Krasnodar to resolve technical and technological problems in marine geophysics. These organizations have at the same time not yet fully set about realizing these tasks.

The Collegium of USSR Minneftprom has charged Glavneftegeofizika with developing measures for 1990 and the 13th Five-Year Plan for a marked rise in the efficiency of geophysical operations. They envisage:

- a sharp increase in computer capacity to support the processing of seismic-survey information in the shortest possible time at great depth and at high quality;
- the widespread incorporation of detailed spatial seismic survey, especially on the shelves of the Caspian and Barents seas;
- the development and incorporation of multichannel (240 channels or more) seismic recording systems, controllable and ecologically safe linear and spatial sources of stimulation, orientation systems for seismic bars and equipment and technology for operations in shallow water; and
- the development and incorporation of well-substantiated progressive standards for marine geophysical operations.

They have also been charged with increasing considerably the utilization factor of geophysical vessels.

The leadership of Soyuzmorgeo has been ordered to reconfigure its operations in accordance with the demands of economic reform and to expand democratic principles in management.

The Collegium of USSR Minneftprom, with the participation of senior representatives of USSR Mingeo [Ministry of Geology] and USSR GKZ [State Commission for Mineral Reserves], considered the issue of the quality of the preparation of reserves at oil and gas fields for development using the example of Var Yegan and other

regions of Tyumen Oblast. It was noted that the raw-materials base for petroleum production is characterized by the considerable output of reserves of major highly productive fields and is basically supplemented by reserves that are difficult to extract from new fields with complex geological structures, extensive gas-capped zones and small sizes and productivity. The share of reserves difficult to extract for Tyumen Oblast—the principal oil-producing region of the country—will reach more than 50 percent by the end of the five-year plan. This requires a new approach to preparing fields for development, a rise in demands for the representativeness and quality of factual materials and their more careful study. The low reliability of oil reserves for some fields with complex structures, especially with a large gas zone, was also noted. The GKZ thus confirmed commercial-grade oil reserves that were considerably less than those counted in the state balance sheet for the Bakhilov and Zapadno-Var-Yegan fields being developed by the Varyeganneftegaz [Var-Yegan Oil and Gas] PO. Material reductions in the extractable commercial-grade reserves compared to those confirmed earlier are expected for the Var-Yegan, Tagrin, Sutormin and other fields.

It was emphasized that as the result of shortfalls in proven reserves, the volume of operations on oilfield infrastructures is increasing considerably, additional capital investments are required and, in certain cases, the oil-production levels envisaged in the planning documents are not being reached, while some collectives are disrupting the fulfillment of state orders for oil production. The corrections in field infrastructure operations caused by changes in the geological situation are leading to significant economic losses. The drilling of 5,877 wells and the construction of 158 cluster sites, of which 23 were already blocked, were thus canceled at fields under development in Tyumen Oblast as a result of this over 1986-88. Some 106 of the 455 producing wells that proved to be under unfavorable geological conditions were eliminated.

The principal reason for the unsatisfactory state of the preparation of petroleum reserves for development is the poor quality of geological-survey work being performed by the survey enterprises of USSR Mingeo and USSR Minnefteprom. The placement of petroleum reserves that do not meet the requirements of the Classification of Reserves onto balance sheets is occurring due to an absence of a reliable base for determining computational parameters (area, thickness, porosity, oil saturation, oil density and subsidence, among others).

The subdivisions of Glavneftegeofizika are paying too little attention to the question of raising the efficiency of geophysical research under the conditions of low-permeability collectors, the large content of associated water in them and the multiphase state of hydrocarbons in the formation. The quality of the initial conclusions that are issued for the geophysical research done is poor and does not meet the requirements made by the USSR

GKZ for the computation of reserves. Detailed seismic survey is not being performed at all of the fields being entered into development.

Glavtyumenneftegaz [Tyumen Oil and Gas Main Administration] and its production associations are not devoting the proper attention to preparing the fields for development. The experimental exploitation of fields in order to obtain initial data for computing reserves and composing process models for development does not correspond to the assigned tasks for the amount of research work being done. Research at experimental sites in order to run through the technology for developing low-permeability collectors in the Achinsk and Tyumen formations and gas-capped accumulations is especially unsatisfactory.

The Nefteotdacha [Petroleum Recovery] MNTK [Inter-sector Scientific and Technical Complex] and SibNIINP [Siberian Scientific-Research Institute of the Petroleum Industry] are not providing the proper methodological guidance for these operations. SibNIINP is not performing a detailed analysis of the development of the given field or one similar to it in composing the technical and economic substantiations for petroleum-extraction factors.

The expert conclusions being issued by the production associations, Glavtyumenneftegaz, SibNIINP and the VNII for Reporting Well Computations that have been drawn both by organizations of USSR Minnefteprom and USSR Mingeo are not always distinguished by profound study and are not confirmed by the actual data of development experience for the fields in Tyumen Oblast and the sector overall. The results of the defense of the reports at USSR GKZ are not widely discussed at the production associations and institutes.

The Collegium of USSR Minnefteprom has charged Glavtyumenneftegaz and the production associations of the sector with analyzing the reliability of oil and gas reserves for each field and accumulation, and where necessary recomputing the reserves and presenting them for confirmation under established procedure.

A strengthening of the monitoring of the drilling-in and development of fields and the analysis of their geological structure and dynamics of their reserves has been suggested, along with the composition of a program of operations for complete survey and the elaboration and refinement of computational and technological parameters for each field being placed into development.

Glavtyumenneftegaz, SibNIINP and Glavneftegeofizika have been charged with strengthening their work in forming the appropriate computer databases for raising the level of preparation of geological and geophysical materials by fields, making its processing more current and issuing reliable conclusions. It is essential to provide for the unimpeded exchange of databases recorded on magnetic tape among users for this purpose, with a regard for the observance of relations of economic accountability.

Glavyumenneftegaz, Glavuprsnab [Supply Main Administration] and the Main Scientific and Technical Administration, in order to provide scientific support for exploratory operations and the planning of field development, have been ordered to take steps before the end of this five-year plan to improve the laboratory facilities of the institutes.

A number of commissions have also been given to sector science. The Nefteotdacha MNTK IGI [Institute of Geology and Development of Mineral Fuels] and SibNIINP should, in conjunction with VNIGNI [All-Union Petroleum Scientific-Research Institute of Geological Exploration] and ZapSibNIGNI [West Siberian Petroleum Scientific-Research Institute of Geological Exploration], summarize the materials from the survey, development and reserves computations for fields with complex structures and compose "Techniques for Surveying and Computing Oil Reserves in Collectors and Oil and Gas Deposits with Complex Structures" in the first half of 1990, issuing recommendations for the optimal density for survey wells and the essential set of research, including seismic survey and procedures for well testing, with a regard for transition zones and their preparation and placement into development.

SibNIINP and the Nefteotdacha MNTK should carry out permanent methodological guidance for operations on experimental field sites with complex types of collectors and oil and gas deposits, and issue recommendations by the end of 1990 for improving the technology for developing this type of field.

Glavneftegeofizika has been charged with summarizing the materials and issuing recommendations for improving the system of geophysical operations and techniques for interpreting geophysical material for complex-structured collectors with a regard for the specific features of the nature of their saturation.

The ministry collegium has charged Glavgeologiya [Main Geological Exploration Administration], in conjunction with USSR Mingeo, USSR GKZ and the production associations, with creating a working group and analyzing the reliability of oil reserves at fields under development that have not been transferred to oil-production enterprises, and coming to a coordinated decision for each of them on additional operations, their executors and the time periods for their transfer to the balance sheets of the oil-producing enterprises, as well as providing a uniform methodological approach for substantiating the computational and technological parameters of oilfields. The consideration of reports on the computation of reserves at USSR GKZ should be done with the summoning of specialists on the physics of formations and field geophysics, development and economics, as well as representatives of the associations and oil-production enterprises.

Other orders were also given to raise the efficiency of geological-survey operations and the quality of preparation of oil and gas reserves.

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## ELECTRIC POWER GENERATION

UDC 621.039:577.47

### Scientist Says Nuclear Power Less Harmful to Environment

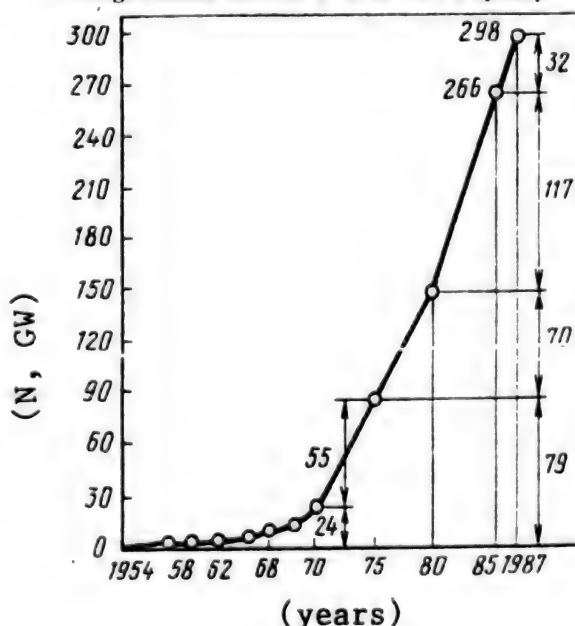
18220177 Moscow ELEKTRICHESKIYE STANTSII in Russian No 7, Jul 89 pp 18-20

[Article by Doctor of Technical Sciences T.Kh. Margulova of MEI [Moscow Power Engineering Institute] under the rubric "Nuclear Power Plants": "Nuclear Power Engineering and the Environment"]

[Text] Currently some 26 countries of the world have operating nuclear power plants—Argentina, Belgium, Brazil, Bulgaria, Canada, Czechoslovakia, East Germany, England, Finland, France, Holland, Hungary, India, Italy, Japan, Pakistan, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, USSR, United States, West Germany and Yugoslavia.

The greatest total AES [nuclear power plant] capacity is in the United States, followed by France, the USSR and Japan. France has the greatest share of electric-power generation from AESs (about 80 percent of the total). The figure shows the development of total AES capacity in the world, from which it can be seen that intensive growth has been underway since 1970. The average annual growth of total AES capacity over 1970-87 can also be cited based on the figure.

Average Annual Growth of Total AES Capacity



|           | Average annual growth in total capacity, GW |
|-----------|---|
| 1970-1975 | 11.0  |
| 1975-1980 | 14.0  |
| 1980-1985 | 23.4  |
| 1985-1987 | 16.0  |

The economic advantages of nuclear electric power plants have been proven by their operational experience. This is not only leading to their development in countries that have taken this path already, but also the beginning of AES construction, for example, in China, Cuba, Poland and Rumania, as well as the planning of AESs in a number of other countries of the world. New construction and design engineering for AESs is currently underway in another nine countries.

There is unfortunately very little or nothing at all mentioned in the existing literature on nuclear electric power plants on their ecological advantages, including with regard to radiation. Atomic bombs, as well as the accidents at Three Mile Island in the United States and the Chernobyl AES in the USSR, have meanwhile fostered the quite widespread dissemination among the population, including in the USSR, of a bias against the development of nuclear power with regard to its supposedly negative radiation effects on the biosphere. Matters are in reality quite the converse. Nuclear power possesses undoubted advantages compared to any other industrial enterprise from the point of view of its effects on the biosphere (including radiation). It is essential to recall first and foremost that mankind has always been and is subject to the effects of ionizing radiation. Cosmic rays and ground radiation are among the sources of radiation that are not dependent on the activity of man. Cosmic rays, interacting with air in the atmosphere, form secondary cosmic radiation. Ground radiation is connected with the presence in the earth's crust of such radioactive elements as uranium, thorium, radium and radon, as well as radionuclides of potassium.

An equivalent dose taking into account all forms of radiation, including that associated with human activity, is currently measured in sieverts (Sv). This unit is linked to the biological equivalent of the roentgen (rem) through the following correlation: 1 rem = 0.01 Sv, i.e. 1 mSv.

Average annual dosages of external background radiation for the population that are not connected with human activity are presented for some cities of the USSR, according to [1].

|                                | Dosage, mkSv/year |
|--------------------------------|-------------------|
| Alma-Ata                       | 1,600             |
| Dushanbe                       | 1,300             |
| Leningrad, Tashkent            | 1,200             |
| Irkutsk, Murmansk, Riga, Chita | 1,100             |
| Ashkhabad                      | 1,050             |

|   | Dosage, mkSv/year |
|---|-------------------|
| Vilnius, Lvov, Minsk                                | 1,000             |
| Kiev  | 950               |
| Moscow, Petropavlovsk-Kamchatskiy, Tallinn, Tbilisi | 900               |
| Astrakhan, Novosibirsk, Orenburg                    | 800               |
| Baku, Vladivostok, Yerevan, Khabarovsk              | 750               |
| Sochi, Yakutsk                                      | 700               |
| Kishinev  | 600               |

Natural background radiation is thus quite high, although it varies with location. The intensiveness of cosmic radiation depends on altitude. Thus, while it totals 350 mkSv/year at sea level, it increases to 1,200 mkSv/year at an altitude of 5 km [kilometers] and to 10,000 mkSv/year at an altitude of 10 km (the flight of modern airliners). The values for ground radiation also differ markedly. The intensity of ground radiation is an average of 0.5 mSv/year at a height of 1 m [meter] from the ground. There are regions of the earth, however (for example, areas with deposits containing phosphorites, coals or shales, among other things, and the more so regions with their own uranium deposits, for which the intensity of ground radiation totals 5, and even up to 20, mSv/year).

There also exist sources of radiation connected with human activity, in addition to the natural sources of ionizing emissions. They are, for example, global sources of radiation brought about by the effects of nuclear detonations, as well as a number of others cited below based on average data across the territory of the USSR over 1980 and 1981 [2].

| Radiation source   | Radiation, mkSv/year |
|--------------------|----------------------|
| Natural background | 1,000                |
| Radiology          | 1,400                |
| Building materials | 1,050                |
| Global             | 25                   |
| Coal-fired TES     | 2.0                  |
| AES                | 0.17                 |

A comparison of the annual radiation dosages from a TES [thermal electric power plant] (2 mkSv/year) and an AES (0.17 mkSv/year) with the natural background (1,000 mkSv/year) shows that the basic effects of radiation are not connected with electric power plants using either organic or, the more so, nuclear fuels.

It must be remembered that effectively any industrial activity of man entails factors that are to this or that extent harmful to the environment. It turns out that the background radiation of a TES burning coal is 10-15 times higher than an AES in general. This is connected with the content of some long-lived radionuclides in coal, for example radium-226 and radium-228, discharged together with the ash. Among the solid fuels that

are burned in TESs should be singled out in particular the oil shales, since their ash contains a certain quantity of uranium-238,<sup>1</sup> thorium-232 and potassium-41. Radiation-monitoring services have unfortunately not been organized at the Estonian and Baltic GRESs [state regional electric power plants], which use shales, and they are essential.

**Nuclear-power engineering has the least effect on the environment.** This is explained to a great extent by the fact that any other industrial enterprise can (although it should not) operate without the complete scrubbing of discharges of gaseous and liquid emissions. Cleaning systems are envisaged in the plans, but they are usually not turned on at all or are not turned on at full capacity. The scrubbing systems for a nuclear-power plant (filtration of gaseous emissions, vaporization and solidification of liquid radioactive wastes) are an organic part of the makeup of the AES itself. **The activity of the AES without turning on scrubbing installations is altogether impossible.**

We will consider the effects of an AES on the environment in juxtaposition with a TES, and even a GES [hydroelectric power plant], aside from the effects considered earlier for the radiation situation.

We will begin with the consumption of oxygen. A TES consumes it for burning fuel, and a GES for the oxidation of the usually inundated timber in organizing the reservoir. The nuclear power plant does not consume oxygen at all.

Thermal electric power plants discharge enormous quantities of ash and sulfur and nitrous oxides as the result of the combustion of organic fuels. The latter are carcinogenic substances. The enormous quantities of carbon dioxide are also worsening the condition of the atmosphere (the "greenhouse effect"). Many industrial enterprises, especially chemical and metallurgical ones, likewise manifest themselves.

Instances where the scrubbing facilities of various plants are either not put into operation or are not fully utilized have been mentioned more and more in the press of late. Not only the rivers (even deep ones), but even the seas are in a sorry state as a result. There can be nothing of the sort with an AES.

It is interesting to note that even a hydroelectric power plant has a negative effect on peoples' health. The presence of minute granules of ice that cause illnesses in the upper respiratory tracts and, moreover, restrain the development of the upper respiratory tracts among children has been noted in Krasnoyarsk Oblast. The haze over GES reservoirs keeps harmful substances over the city.

The situation in the area of nuclear electric power plants is thus the most favorable from the viewpoint of the ecology. This is naturally correct only in the event of the strict observance of operating procedures. A failure to observe operating procedures can have serious consequences for an AES, as the public well knows. It is

unfortunately little known that the accident at Chernobyl was just a gross violation of operating procedures. Moreover, design alterations are currently being made for existing reactors of the Chernobyl type that will lead to automatic shutdown in the event of attempts to violate operating procedures.

The prejudice against nuclear power among the public is also connected with the complete absence of published features on the radiation situation in the regions where AESs are located. It is well known that laboratories are constantly making observations for inside and outside radiation monitoring during normal AES operation, i.e. both at the AES itself and at various distances from it, including a 50-kilometer zone. Why not publish that data, at least periodically? It seems that a corresponding roundtable should be organized on central television with the participation of leading specialists from operating AESs in it. They know the radiation situation very well. If the personnel of the AES had grounds to be apprehensive about the level of radiation, say, in the AES settlement, the tens of thousands of specialists who live in the AES settlements with their families would probably not be working at AESs in the USSR.

The journal *TEPLOENERGETIKA* No 2 for 1989 has published data on the radiation situation surrounding the Novovoronezh AES. It shows that over the more than 24 years of operation of the Novovoronezh AES, its contribution to the radiation situation has not exceeded 8 percent of the maximum allowed by the norms. Systematic publication of the radiation situation around the AESs would allow the public to form their opinions in a well-founded manner about the real safety of AESs.

A potential danger exists from nuclear power and cannot be forgotten. It demands a most careful attitude toward questions of the planning, installation and operation of AESs. It is essential therein to ensure the minimum risk and the maximum reliability. Nuclear power should be developed taking this into account, since there are no alternatives to it. The public should know that the development of nuclear power accepted by the 27th CPSU Congress conceals no dangers.

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#### Footnote

1. The Kukruze shales contain 10 grams of uranium per ton of shale (their combustion is permitted); dictyonous shales have up to 100 grams of uranium per ton (their combustion is not permitted).

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**Reactions to Draft Law on Labor Disputes***18280286 Moscow TRUD in Russian 31 Aug 89 p 2*

[Article by M. Pshennikov, head of the Legal Advice Bureau of the Leningrad Oblast Trade-Union Council: "Conflict"]

[Text] **The USSR Draft Law on the Procedure of Settling Collective Labor Disputes (conflicts), which, in particular, provides for the right to strike, was published recently. We publish the opinion of a worker, an economic manager, and a trade-union worker—jurist—on this problem.**

**Worker: Right to an Extreme Measure**

The recognition of a collective's right to strike eliminates one of the major injustices in our life. After all, there is no logic in the fact that the West's working class "oppressed" by capitalist exploitation is permitted to apply this powerful means to protect its interests, but we, made happy by all the benefits of "free labor," are not.

At the same time, it is difficult to mention any of the recently published draft laws, which would evoke such contradictory evaluations as the Draft Law on the Procedure of Settling Collective Labor Disputes. I do not rush to condemn those who are categorically against it, who consider the very word "strike" unacceptable for our vocabulary. The wider the spectrum of opinions, the more there is democracy and the farther we get away from thoughtless "nationwide approval."

I refer to those who welcome the appearance of this draft law. Nevertheless, as it seems to me, we still must work on it. Let us take article 8, which, in practice, deprives workers in entire national economic sectors of the right to strike. Moreover, it is formulated incomprehensively. It is not clear whether workers in these sectors cannot strike at all, or only when this creates a "threat to people's life and health..." However, a strike can also lead to such consequences in other sectors. For example, those who are responsible for heating apartments, hospitals, and schools leave their jobs in the middle of winter. This article, for example, mentions "continuously operating production facilities." However, this includes all metallurgy and the chemical industry. Why is such a numerous detachment of the working class, which is highly respected in the country, deprived of the right to use this extreme measure to protect its interests? However, the specific nature of these sectors and their special situation, of course, should be taken into consideration.

In my opinion, article 12 should be set forth in the following manner: "The continuation of a strike, after it is recognized as illegal, is considered a breach of labor discipline..." This recognition can arise in the course of a strike. Article 12 in its present form, which states that participation in an illegal strike is considered a breach of labor discipline, legalizes nothing but the possibility of reprisals against strikers.

Finally, the last. It is necessary to bring all the labor legislation presently in effect into conformity with the new law. Or to declare in this law that everything existing in heretofore applied legal norms, which contradicts it, is declared invalid. The Code of Labor Laws now has many articles, which make it possible to "punish" strikers. There is both "refusal to fulfill an assignment" and "unauthorized abandonment of the place of work" and so forth.

The new law is extremely important for millions of workers. The slightest omission in it will serve as a convenient loophole, which will make it possible to infringe upon workers' right to strike. During a discussion something can pass unnoticed. Therefore, I would propose that 1 year after its adoption we should return to it and introduce amendments in it. They are sure to arise in the course of practice. After all, no, even the cleverest, legislator can guess in advance the entire diversity of life situations.

V. Moshkin, electrician at the Sverdlovsk Industrial Rubber Products Plant, Sverdlovsk

**Director: Strike? Yes. But What Kind?**

If the draft law is discussed as a whole, I personally have the feeling that it was prepared hastily under strong emotional pressure. Instead of analyzing its nature, its authors rushed to legalize, regulate, and put within some framework a phenomenon that already existed in real life. Now it is not a matter of the very procedure of settling labor disputes, which, judging from everything, was developed on the basis of international standards, but of the draft's central point—the collective's right to stop working, that is, to strike.

What is a strike? A means of economic pressure on someone for the purpose of gaining some concessions. For example, in Western countries workers pressure the entrepreneur: either fulfill the strikers' demands, or you will incur vast losses due to the enterprise's stoppage. But whom does the collective "pressure" under our conditions? First of all, itself. The draft law does not provide for compensation for damage due to work stoppage even when the collective is right.

Allied enterprises, of which every enterprise has dozens and sometimes even hundreds, will be under the strong economic pressure of a strike. What should their actions be? According to the logic of things, they should expect compensation for their losses at the strikers' expense, that is, demand fine sanctions against them. How can it be otherwise, if we want to create conditions, under which everyone determines economic relations? Why do hundreds of other collectives have to suffer (as is the case now) from the fact that someone is on strike? Here not the capitalist entrepreneur, but the enterprise itself, which stopped working, is threatened with ruin. Under our conditions a strike is a running knot, which we tighten around our own neck with our own hands.

Of course, all the above-stated does not mean that a law on the procedure of settling labor disputes is not needed. Such a law is simply necessary. In my opinion, the very procedure provided for by the draft is fully acceptable. However, what will remain from the published draft law if, essentially, the main point—on the collective's right to stop working—is pulled out from it? Nothing, platitude.

I am not an idealist and I well realize that situations, when the parties will not be able to come to an agreement, will arise constantly. What is to be done? According to the document, the collective has the right to use all the other means provided for by law right up to... to meet its demands. What other such means does the collective now really have? It is not clear. In my opinion, this is the draft's weakest point and new approaches are needed precisely here.

The task lies in placing economic responsibility precisely on those who are to blame for the situation that has been created. For example, we have a conflict with a ministry, in which we are right. To strike? It doesn't pay. But why not stop deducting the funds assigned to it? This method is extremely effective and, above all, is exclusively of the nature of economic pressure. It is also fully suitable for cost-accounting relations within an enterprise. For example, a cost-accounting collective, which has not obtained the satisfaction of its legitimate demands, stops deducting funds for the maintenance of the administrative apparatus. However, in order that this lever may operate, a "trifle"—real cost-accounting relations—is needed.

The same approach should also be in the interaction between an enterprise and local bodies of power. The collective should have the right to simply stop deductions into the local budget. But our association, for example, now transfers 1 million rubles annually into it. Is this substantial? Indeed, very much. Again, real economic relations between [bodies of] power and an enterprise are needed.

Once again I ask to be understood correctly. I am not against a strike as a means of economic pressure. It is a matter of a new, if you wish, socialist content of the concept of economic protest against the position of a ministry, a local soviet, and so forth. By not transferring a single kopeck to them, we also "are on strike," but for ourselves; for all the rest—we work. The result can be the same, but such a form of "strike" will not result in damage for the enterprise itself or for society. The law on settling labor disputes should correspond to, not contradict, the spirit of reforms implemented in the country. It should not be adopted separately. It should only be adopted in a package with other laws, which should most radically change economic relations and, consequently, the economic situation in the country. Then the question of strikes will also be seen in quite a different light.

A. Grezin, general director of the Mikrokriogenmash Scientific Production Association, Omsk

#### **Jurist: More Precision!**

Strikes were not legislatively regulated in our country previously. It was considered that they did not have a place in our society. However, if there are grounds for collective labor disputes, their legal regulation is also necessary. In some cases the lack of legal regulation creates among strikers an illusion of all-permissiveness and an impression that a strike is the only universal means of restoring social justice. The administration acts as it considers necessary and not according to law.

Taking into consideration that a strike is an extreme measure of settling a labor conflict and is connected with causing material damage to the national economy and the workers themselves, it is important to determine maximum strike periods, to solve the problem of property responsibility for the damage done, and to change the procedure of adopting a decision on the declaration of a strike. In my opinion, it should be adopted at a meeting of the labor collective provided that no less than two-thirds of those present vote for it, not by the majority of the collective members as provided for in the draft.

To be sure, the law should contain legal restrictions on the right to strike as provided for in article 8. At the same time, however, workers' rights are restricted "if this creates a threat to people's life and health." Apparently, the law should mention a specific body, which, with due regard for existing features, would also permit collective labor disputes at these enterprises.

In my opinion, the Draft Law on the Procedure of Settling Collective Labor Disputes lacks precision and simplicity in text presentation. For example, article 9 says that the decision by a board of arbitration on an examination of a labor conflict is mandatory for execution if the parties have agreed on this during the filing of an application. But if this has not happened and the parties have not agreed on this? What body will settle their dispute and under what conditions will the decision be mandatory for execution?

The same article provides for the duty of superior economic and trade-union bodies to submit a special report with respect to officials, through whose fault a collective labor dispute has arisen, and to advise the labor collective of the results of examination. However, the draft says nothing about the consequences of nonfulfillment of this duty.

I would like to see in article 9 a clear procedure and specific periods of adoption of a decision on declaring a strike illegal. After all, article 12 of the draft, for participation in such a strike, provides for the possibility of imposing a disciplinary penalty, including firing a worker.

It is desirable that the law direct trade-union organizations of all levels toward activity and aggressiveness in the protection of workers' legal interests and in no way smooth over the responsibility of managers guilty of the

occurrence of collective labor disputes and of a delayed execution of the decision adopted by conciliation bodies. In connection with this it is necessary to supplement part II of article 12 with a directive on the possibility of instituting disciplinary and material, as well as criminal, proceedings against the culprits—a directive not on the right, but duty, to institute such proceedings.

The miners' strike has shown that it gives rise to new bodies—strike committees, which subsequently are transformed into workers' committees, and oblast strike committees, into councils of workers' committees. In essence, these are workers' bodies, which not only form and uphold workers' legal rights and interests, but also, after the termination of a strike, control the execution of the decisions adopted on the basis of the results of the strike. There is not a word about them in the draft.

### **Present, Future Role of Donetsk Strike Committees Viewed**

18280276 Moscow KOMSOMOLSKAYA PRAVDA in Russian 19 Aug 89 pp 1-2

[Article by A. Kalinin and O. Musafirova, special correspondents, Donetsk Oblast: "A Strike Committee"]  
[Text]

[Passage omitted]

Today everybody recognizes the fact that a strike is an extreme and yet necessary measure. It has become a reaction to the bureaucratic clumsiness of our state machine. Indeed the workers have advanced nothing that was not raised earlier at various levels: during party plenums and sessions, at trade union conferences and in the press—to provide complete economic and financial independence for the mines and to permit them to sell their above plan coal, to improve the system of organization and wages, to display concern for those personnel who acquired illnesses or injuries in the mines, to return sanatoriums and rest homes to the workers, and so forth. These questions were raised but not resolved. Everyone came to understand that the existing institutions of power are unable to change the life of the miners. The cumbersome and obsolete administrative machine in which attempts were made to introduce a new program simply began to slide. Just as in the past, the broad masses of people called upon to revive this machine stood off to the side and watched. Democratization was permitted only within those limits authorized by the party-administrative staff. Just as in the past, the trade unions protected the administrator. The councils of the labor collectives, under the informal and at times formal direction of the directors, were unable to share authority with the trade unions. Working control, established under the control of an administrative-trade coalition, either was inactive or it stuffed its own pockets. And all of this took place against a background of speeches on perestroika and its obvious successes and victories. And the force capable of disrupting all of this was not seen,

owing to the fact that the working class was seen as nothing more than a work force.

But a strike burst forth. And all those who were accustomed to seeing themselves at the head of columns became confused. Not one formal organization could be found which was capable of heading the movement or exerting an influence upon it. Later they remembered and they rushed to help and they did provide assistance, albeit in a cunning manner, and yet they forfeited all trust. Today the miners are relying only upon themselves. The strike committees are organizations which they created themselves from beginning to end.

Initially they diffidently attempted to refer to them as "initiative committees," with this definition emphasizing the temporary nature of the formations. The "initiative" will come to an end—it must sometime come to an end! And then there will be those who will return to the coal face. And others will remain up above. Still a third group will roll their Volgas out of garages and deliver reports to the various levels concerning the completion of an extraordinary event. Because the possibility of presenting a viable elective organ, created not in accordance with the rules, but rather over the course of one night's time despite noise and shouting and in the absence of unsanctioned and questionnaires, is simply unthinkable.

[Passage omitted]

A strike is not simply a peaceful activity with slogans. Arising spontaneously, it gives rise to many spontaneous events. A general director of an association was forced to eat bread and caviar. The secretary of the municipal committee, using a microphone and without furnishing any explanation, accused him of abusing his power. They refused to listen to another important political leader.

Anger was definitely present here.

But it was only minor in nature. The coal face was being flooded by a hot hand. Hotheads had proposed the removal from operation of air supply pumps. It was as though later they would restore proper order. The task was to avoid confusion and not to provoke a reaction from the state. But to go against the wishes of the crowd.—And it happened that they were discredited as work leaders and they yielded their positions. But even these later fell from grace. A strike constituted a great drama and the strike committees were formed during the course of a bitter political struggle. We did not make a slip in referring to it as political, in view of the fact that a strike, despite its economic nature, has nevertheless become a political phenomenon. Its dramatic nature has further been aggravated by the specific nature of mining operations.

The long working face of a mine is not an office with polished furniture that stands empty for weeks on end. There are those who must hold working meetings in it, ensure good ventilation and pump out water. But an individual who today, in behalf of the "new authority,"

issues instructions calling for work to begin, is balancing on the edge of a precipice. A step taken to the left—and there is an end to the many years of work by a collective which achieved rights that cannot be realized in unprofitable production operations. A step to the right—and the brand of a strike-breaker appears on one's brow. Quite often, standing at the head of the mining strike committees and willy-nilly giving the appearance of the director or chief engineer, the work leaders after a day or two relinquish their authority. And the next staff of the committee consciously includes "specialists" drawn from among the leadership. In principle, there are enough sleepless nights for realizing: that there is no need for threatening the entire engineering staff with the slogan, "Down with those bureaucrats who we are carrying on our shoulders!"

This is not a lead-in to the subject of the helplessness of miners. But we can state that it is the strike committees consisting of sober-minded workers, intelligent engineers and communists with party cards in their pockets and also people's deputies and true komsomol leaders and a genuine trade union aktiv, who placed the strike in the channel of specific solutions. And on the other hand, the hoarse and embittered debates held within the committees, from which were ejected those of different opinions, they took a stance against the flow of common sense, at times changing the requirements and at other times supplementing them with extremely diverse points—commencing with the sudden arrival of Gorbachev and ending with the sale of beer in any amounts either day or night.

But there was a time when the members of the strike committees—generally normal people—tried to appear as extremists and socially dangerous elements.

[Passage omitted]

The strike committees are presently engaged in reelecting the trade union committees and the labor collective councils and also with the recertifying of administrative personnel. They have clearly determined for themselves that this could not have been done earlier: the STK [Labor Committee Council] must exercise control over the economic activity and the trade unions—protect the interests of the workers. It cannot be said everything is proceeding smoothly here. Nor is this only because the actions of the strike committees are at times in conflict with the existing regulations, statutes and instructions. In the final analysis, the instructions can be recognized as being ineffective, since the need for elections is included in the document signed by the governmental leaders. Many contradictions arose during the course of carrying out this work.

First of all, there is a shortage of experience. It is not an easy matter to remove a double-dyed bureaucrat or swindler from the trade using one's bare hands. The strike committees are searching among the workers for those who formerly carried out such work. And so long as no experience is available, more often than not it

becomes necessary to carry out a "bluff"—using the force of temporary authority.

Secondly, a confrontation began to take place between the engineers and the strike committees. Although not a classic antagonism, nevertheless the former do not wish to recognize the authority of the workers to be superior to themselves, considering them to be incompetent and thus not authorized to interfere in the holy of holies—the administration of production operations. And on both sides there are many ambitions, despite the fact that both are aware that in the future neither side will advance in the absence of the other.

The relationships with the party organizers are proving to be difficult. Despite the fact that there are many communists and party committee secretaries among the strike committees, there is still beyond any doubt an absence of trust. The strike has shown that given the present complicated conditions, one must undertake the necessary initiative and accept responsibility. In the Donets Basin, many party organizers at mines have awaited instructions from above, despite the fact that from the very beginning they were aware that the requirements of the miners were fair. The instructions received were evasive in nature and required explanations. And thus instead of heading the movement, the commissars (we do not have in mind the party functionaries) turned out to be behind the approaching network. Today they are reaping the fruits of this indecisiveness. In our case, the secretary of one of the party committees complained that he was not allowed to attend a strike committee meeting. "And what will you say?" "I will say as follows: if you do not believe in this party organizer, then let us elect another; if you then believe—believe to the very end!"

And still one other dangerous trend was noted following the strike. The miners are demanding the closing of trade-intermediate and medical cooperatives. This cannot be done on a legal basis. There is one solution—engage in illegal actions. At the present time, the cooperators are being troubled by fire inspections and personnel from sanitary stations and they have been assigned the task of finding a reason for taking action. And they are finding a reason. They are closing down the cooperatives. But this will undoubtedly cause harm to the cooperative movement on the whole. The cooperators reason as follows: once they succeed in closing down one cooperative, they will be able to close down others as they wish. Yes and illegal actions, regardless of how noble the goal being pursued, are nevertheless still illegal and must be punished. Is it possible that the worker is once again falling into the swamp of voluntarism and administrative dictates?

Moreover, the members of strike committees are quite aware that this is not a simple task. We asked the members and leaders of the strike committees if a rebirth of the worker aktiv was not possible. Yes, they replied. It is possible and yet here much depends upon the aktiv itself and upon worker control over this aktiv. Is there a

danger of control being exercised over a strike committee from without? Yes, there is. Within the strike committees, there is a great amount of concern over the influence by leftist extremist forces and the staff bureaucracy. Can the movement develop in the absence of participation by the intelligentsia? No, but there are different types of intelligentsia.

It bears mentioning that the miners have their own good political figures in the form of such people's deputies as Boyko, Saunina and others.

We are writing about the strike committees today not because we are delighted with them. Our acceptance or non-acceptance is of little consequence. The strike committees are an objective reality. The experience of the miners is being adopted by the metallurgists and coal-tar chemical specialists. We attended worker meetings at the Makeyevka Metallurgical Plant. They were also organized and advanced numerous requirements. It is naive to assume that with the end of the miner strike everything will be just as it was in the past. This will not happen.

The strike committees will soon cease to exist at the mines. After merging with the trade union committees and the councils of labor collectives, they will transfer their authority over to these organs of worker self-government. They will control fulfillment of agreements between the miners and the government. However, even after they have dissolved themselves, the strike committees will retain the right to assemble anew at any time should such a need arise.

### Wage Leveling Causes Inequities for Social Classes

#### Average Incomes Examined

18280289 Moscow PRAVITELSTVENNY VESTNIK in Russian No 17, Aug 89 p 12

[Article by Yu. Rytov: "Social Justice: The Emotions and Prose of Life"]

[Text] We recall that many people's deputies made the defense of social justice the basis of their programs during the campaign before the elections and promised to resolve all the most urgent social problems—by increasing wages and pensions, providing apartments, improving the supply of goods, and closing the "harmful" enterprises. In trying to keep their word, they literally exploded on the rostrum of the congress, and the word "Give!" as applied to territorial districts, sectors, and public organizations or individual enterprises at times drowned out the discussion of national problems. In the figure of speech used by L. I. Abalkin, deputy chairman of the USSR Council of Ministers, the impression was created that many of the deputies had come to the congress to "divide the pie" and each one wanted to "cut off" a little larger and juicier piece. Indeed,

according to specialists' calculations, more than 1 trillion rubles would be needed to meet all the demands that were made...

Indeed, emotions often prevailed over commonsense and economic calculations in the deputies' statements. By pressing for additional allocations from the budget for "their" region or "their" sector, certain speakers "were forgetting" to indicate the exact sources where these funds can be found. They somehow lost sight of the fact that there is no more state "pie" which can be divided up—it was eaten a long time ago! And the state purse is not simply empty—we are living on borrowed funds. After all, according to more precise data, the budget deficit now amounts to 120 billion rubles, with a foreign debt of 34 billion...

So can we forget about social justice for a time? Postpone a rise in the people's living standard to the future?

Of course not. In the final analysis, the most heated and intensive debate at the congress and at the USSR Supreme Soviet session made it possible not only to bring to light the entire range of critical social and economic problems, but to stand on firm ground in resolving them by establishing a system of the most obvious priorities. And social protection for citizens is the problem in first place here, with complete justification; it is the foundation and the cornerstone of social justice in general.

Look at the table, dear readers, which shows the distribution of population in the country by total per capita income (calculated by the USSR Goskomstat [State Committee for Statistics] from data on a survey of family budgets in 1988).

|  | Average Annual Population  |                           |
|--|----------------------------|---------------------------|
|  | Millions of Persons, 285.5 | Percent of the Total, 100 |
| Average Total Per Capita Income for Entire Population, in Rubles Monthly |                            |                           |
| Up to 50   | 8.3                        | 2.9                       |
| 50-75  | 27.7                       | 9.7                       |
| 75-100   | 44.7                       | 15.7                      |
| 100-125  | 50.2                       | 17.6                      |
| 125-150  | 44.9                       | 15.7                      |
| 150-175  | 35.0                       | 12.2                      |
| 175-200  | 25.7                       | 9.0                       |
| 200-250  | 26.8                       | 10.1                      |
| Above 250  | 20.2                       | 7.1                       |

I recall that according to information from the USSR Goskomtrud [State Committee for Labor and Social Problems] and the Goskomstat, the living wage last year was defined as 78 rubles per month for each family member. And it states as a footnote to the table that 41 million persons, or 14.5 percent of the population, have an income below this level. And this means that every eighth citizen is living below the poverty line!

And the task of providing social security for these persons under present conditions cannot be solved just by increasing their wages, pensions and benefits. Unfortunately, we all are well aware that money (in modest amounts) is far from everything for us. We still need to provide products, goods and services with this money—strictly in accordance with the state calculations. In other words, the people should be given firm guarantees that their money is backed up by real material values.

A reader may ask: is this task feasible? Completely. Let us return to the statistics again. If, for example, we compare our level of foodstuff consumption—per capita—with other countries, it will become clear that we are not lagging behind a number of them at all now. Last year the quantity of milk and dairy products, calculated as milk, that we consumed was 356 kilograms. In Hungary, 256 kilograms were consumed and in the United States, 265 kilograms. Egg consumption amounted to 275, 333, and 238 units, respectively. Sugar consumption was 47, 34, and 28 kilograms. Potato consumption totaled 99, 50, and 57 kilograms, respectively... On the other hand, there was a sharp gap: 1.5 to 2 times less meat, vegetable oil, fruits and berries were consumed.

But here is the paradox! In many regions of the country there is a shortage of even those products that we have enough of according to the statistics.

The situation with industrial products is no better, if no worse. Even those commodities that filled the shelves several years ago have disappeared from the stores.

What is the reason here? The main one is well known: the overall excess of monetary incomes over commodities. However, other, indirect causes are also complicating the market conditions drastically.

In particular, the so-called agiotage demand cannot be disregarded. Rumors of an increase in retail prices and lack of confidence in the stability of trade induces a certain section of the population to buy up everything at one time—"for stock."

The grossest miscalculations in the trade structure and mistakes in the distribution of goods also have a deplorable effect. And sometimes, not simply miscalculations and mistakes, but completely deliberate actions by officials in stocking up items in short supply, then reselling them later for three times as much. And for this reason it is quite logical that the question of working control over the organization of trade and extension of its rights and functions was raised at the session of the USSR Supreme Soviet.

All the factors cited above distort and even simply deform the average statistical picture, even when it looks quite favorable. On the whole, it would seem, it is good. But as applied to specific social groups of people and specific regions, it is poor, very poor! And for that reason it is apparent that the field of product and industrial commodity distribution requires serious correction. It

appears that other, emergency measures, even if temporary, are needed for the social protection of sections of the population that have not been adequately provided for in the current situation.

In particular, certain specialists are pressing for the introduction of standardized supply of the most important types of foodstuffs. Persons of scanty means could also receive the right out of turn to purchase the industrial items that are most needed. It is not hard to see that such a step would also be a manifestation of social justice which would put social policy on a course that is wise and understood by all. The state could provide for the interests of those who need the protection of society first of all: children, the disabled and the ill. At the same time, the question of "feeding troughs" for the "nomenklatura" [top officials] would be removed by itself. Only a minimum! All the rest in cooperative trade and in the market...

But a system of food orders at enterprises and coupons for certain types of products for the public exists even now, the meticulous reader will say. Yes, they exist. However, in an extremely arbitrary form, and it is not regulated by strict state levers and opens the locks for redistribution of goods for the benefit of those who are well off.

Of course, setting norms for a system of supply would not mean that norms would be established "from the top." With the shift to regional cost accounting and self-financing, this would be the business of local authorities. However, the general principles of the new system of distribution would have to be defined centrally.

And of course, the standardized supply of essential commodities from state resources and in accordance with state calculations would presuppose every possible development of cooperative as well as commercial trade in general. Let the laws of the market function, but without infringing upon the interests of the persons of scanty means...

So the search for the shortest routes to the restoration of social justice in our society is continuing. The debates are under way and passions are agitated as before. It is worth stressing that the debate is not about long-term measures—they have been defined in principle. The point is basically what has to be undertaken now, what has to be done immediately.

### Higher Incomes Appraised

18280289 Moscow PRAVITELSTVENNYY VESTNIK  
in Russian No 18, Sep 89 pp 1, 8

[Article by Yu. Rytov: "Social Justice: Leveling? Common Sense?"]

[Text] In the newspaper's previous issue we examined certain problems of social justice as applied to the sections of the population that are not adequately provided for. Today let us try to assess the situation from

another viewpoint: to analyze the social status of those of our citizens who have a high level of financial security and their privileges and benefits.

According to official data, last year 20.2 million persons (7.1 percent of the country's population) had a total average per capita income in excess of 250 rubles per month. These are the persons who are most well-to-do. Who are they? Workers of the very highest skill: steel workers, blacksmiths, lathe operators, operators engaged in underground maintenance of wells and in extracting oil and gas, and the operators of bulldozers and excavators. Scientists who possess a doctor of sciences degree, as a rule. Literary figures and artists who have been able to win a name for themselves, as they say. Military cadres with the rank of colonel or higher. The top level of production personnel: the managers of enterprises and trusts and the chiefs of railroads. Now there is an ever-increasing group of cooperative operators. Finally, persons who hold responsible positions in the structure of state administration.

And very likely the large salary, benefits and privileges which these social groups enjoy are perceived in our society as a normal phenomenon that is fair and does not give rise to unfavorable criticism. Except for one group—the last in this list, which it has now become fashionable to call functionaries or bureaucrats.

It is probably a very popular slogan now: abolish their benefits, deprive them of privileges, and redistribute their wealth. It is a very important question and it deserves to be thoroughly examined.

First of all, we cannot help but note the circumstances which irritate the people the most: the secret nature of the distribution of wealth, the effort to keep the facts that are common knowledge to everyone a deep secret. This is also the legacy of the stagnation period and the appalling deformation of distributive relationships, when at the will of one person groups of his "comrades-in-arms" in the entire pyramid of power were presented not only with modest military-type jackets, but lavish gifts of money, and all the attributes of life "on demand," when the names of streets and cities were changed and odes were made up in honor of the "leaders" not only in the capital, but locally as well...

But that time has passed—and it never will return.

Now we know everything—including the salaries of the members of government.

So the monthly salary of the chairman of a state committee is 700 rubles. A minister's salary is 800 rubles. How did they get to such a life? Simply. As a rule they began as workers. Then they worked and studied. And they passed through all the levels of the production hierarchy: foreman, shop chief, plant manager. Believe it: even now, in the ministers' offices, they sometimes recall those times when stimulating work was in their hands, when they saw the concrete results of their labor, and good earnings were received in an easier way.

Well, what about the others? The overwhelming majority of responsible officials in the CPSU Central Committee, the Secretariat of the Presidium of the USSR Supreme Soviet, and the Administration of Affairs of the USSR Council of Ministers receive a salary of 320 to 380 rubles per month. Ordinary officials of ministries and departments receive from 160 to 250 rubles per month. As a comparison I will note that the average monthly wage of workers in the coal industry was 361 rubles last year.

When we complain about the incompetence and disruptions in the activity of individual management components, we cannot avoid seeing the true reasons for this: the level of persons' skill is determined by the level of their wages. As in other areas of our life, the leveling cultivated for decades has inflicted inexhaustible damage on the work here as well. The comparatively low financial security of the basic management personnel has fostered an attitude of indifference toward the work and disregard for the end results of labor, and has engendered irresponsibility and bureaucratism.

Well, what about the benefits?

The overwhelming majority of employees of the central apparatus of ministries and departments don't enjoy any privileges at all. Dinner in the department dining room? But in the selection of products and their quality they are quite frequently inferior to the dinners in many plant dining rooms. A department country house for a season? If one is very lucky, at the decision of the trade union committee, and one pays for it out of his own pocket, and it is not cheap...

Only the highest level of management personnel—beginning with members of the collegiums of USSR ministries and departments—enjoy the privileges and benefits. There used to be a special ration (now abolished) with a subsidy in the single amount of its cost. There used to be official vehicles (the fleet of them has been substantially reduced). There used to be (and still are) polyclinics, hospitals and sanatoria of the Fourth Main Administration under the USSR Ministry of Health. But the work day for such persons used to last and continues to last for no less than 12 to 13 hours...

How do we weigh these benefits on the scales of social justice? Is it worth departing from positions of common-sense and not taking notice that behind the appeals to abolish all types of benefits and privileges there is more often than not the well-known principle of leveling...

Leveling is dangerous everywhere: in the work place and in managers' offices as well. The widespread and thoughtless discrediting of the state management system can bring nothing but harm. The recommendations to abolish the Gosplan immediately, and the ministries and departments along with it, seems naive at least. After all, more than one state has not existed and does not exist without a powerful structure of centralized management. It is another matter that the functions of economic departments and sectorial ministries will undergo substantial changes in the foreseeable future. But they will

be functioning, and their kpd [efficiency] depends directly on public support—both morally and materially.

World experience attests to the fact that competent, able people who already possess practical work experience enter government service, as a rule. Government service is prestigious, employees are well-paid, and broad opportunities are opened for them.

But for us? How many persons have settled by chance in the ministry labyrinths until recently... A poll conducted by the NII truda [Scientific Research Institute of Labor] in 10 ministries and departments brought startling results to light in this area. It was revealed that only 59 percent of the employees polled had a clear idea of the distinction between the cost accounting models. Yes, it is very difficult to find competent people with such wages.

So the question of the financial security of staff employees and their benefits and privileges is not as simple and unequivocal as it seems at first glance. Why is that a person begins to receive less after a long ladder of promotions than when he started his course in life? Is that really fair?

One would think that we would not be surprised by a shortage now. However, we have encountered a new form of it recently: a shortage of party and soviet employees and managers. The "discrepancy" in their salaries, compared with those of economic managers of the same rank, has been so great that the vacancies that have existed in local organs for a long period of time have not been filled, because no one wanted them.

Something similar is taking place in the state's administration. "Respectable" scientists and experienced economic managers refuse to come here. Why? After all, in scientific research institutes or design bureaus, or at any large enterprise, they receive significant bonuses in addition to their salaries. Moreover, as a rule, they enjoy many benefits and privileges, the extent of which

depends on the financial status of the enterprise: their own polyclinic and relaxation area, a subsidiary farm and a department for orders. And the main point is that it is not considered shameful: everything has been earned with their own hands...

Indeed, the work of any person should be compensated in complete accordance with its quantity and quality. We all fight for this principle with our two hands. But for some reason, we modestly become silent when this concerns the area of management. A person follows a long path in management. And often he has relinquished those benefits that he had in the production area. And not only the word "must" determines this decision. There is also the word "duty"—to the people, to society, which they are ashamed to utter now. And when we speak about high salaries, we often forget the elementary moral concepts which determine the life of every manager.

Can any society exist without management? No. Self-government has now been brought to the forefront. The collective should govern its work, and the public should govern its country. But obviously there will also be specific persons who perform these functions, put forward by the collective and by the people.

What is the use of the best laws if there is no one to implement them? The area of government administration ought to have its original and alas, its shattered authority returned. It needs to be reinforced with professionals—competent, thinking people. Persons whom it would be inconceivable to label as functionaries and bureaucrats. As far as salaries and benefits are concerned (if any remain), the principle of social justice demands only one thing here: everything that is done should be earned in full, it should be perfected and have a specific national economic result. Let economic expediency and commonsense take the place of the sluggishness of the leveling tendencies that are dying out.

## CIVIL AVIATION

**Tu-204 Operational Tests Delayed**

904H0002A Moscow VOZDUSHNYY TRANSPORT in Russian 29 Aug 89 p 1

[Interview with Boris Viktorovich Bondarenko, USSR people's deputy and senior navigator of the Borispol Aviation Enterprise, by VOZDUSHNYY TRANSPORT correspondent V. Tishchenko: "Where the Labyrinth Is Leading"]

[Text] *When will the operational tests of the Tu-204 begin at the Borispol Aviation Enterprise? When they heard this question, some managers shrugged their shoulders, and others gave dates which they made up, as they say. However, there was a hint of uncertainty about the new aircraft's future in the answers, and concern about the extremely important work. This was the subject of a discussion our correspondent had with Boris Viktorovich Bondarenko, USSR people's deputy and senior navigator of the Borispol Aviation Enterprise.*

[Bondarenko] In my view preparation for testing of the Tu-204 has been handled incorrectly from the very start, that is, as it was with the An-10, the Tu-134 and the Tu-154. More simply stated, **an erroneous ideology** was chosen, and an efficient path to the objective is automatically ruled out for this reason. Production confusion is already present now. What will happen after the Tu-204 is registered at Borispol? Aviation specialists and our clients will reap all the bitter harvest when flights are begun—the aircraft will be on the ground more than in the air.

[Tishchenko] We have just begun the conversation, Boris Viktorovich, and that is such a dose of pessimism. Haven't the people at Borispol distinguished themselves by mastering new aircraft quickly and with high quality in past decades? What can prevent them this time?

[Bondarenko] True, such specialists have not been transferred from our collective, but does everything depend on them? Let us ask ourselves this question, for example: to whom has familiarization with the Tu-204 been entrusted? The people at Borispol. Hence, it is logical that all the reins of power should be in their hands—the independence and responsibility for all the decisions being made; this is what the Law on the State Enterprise says. What is actually happening?

A temporary scientific-production subunit (VNPP) has been established under the Ukrainian Administration; it is made up of specialists from the design bureau, the management, and institutes in our ministry. Its functions have been defined: technical maintenance and repair of the new aircraft. You sense that the aviation enterprise itself was put on the side, or on an equal footing, at best...

Now we will present any question that arises in the process of mastering the Tu-204 to the design bureau, for

example. How will it be solved? By way of a long corridor with many turns: Borispol to the VNPP, to the Ukrainian Administration, to a department of the Ministry of Civil Aviation, to the Ministry of the Aviation Industry. And there are dozens of such questions today already; tomorrow hundred and thousands will make their appearance. How much time we have to spend to overcome the bureaucratic labyrinth! And in addition to this VNPP, similar VNPP's are being planned in the services of the aviation enterprise!

[Tishchenko] The Tu-204 is a rank higher in its structural features than the aircraft developed to date. And we cannot do without the most experienced production managers, scientists, and representatives of associated sectors. To put it differently, the aircraft requires a new relationship, and doesn't the VNPP blend in with these requirements?

[Bondarenko] Neither my colleagues nor I are saying anything against such a subunit. It is just impossible to agree with the principles of its formation and status. After all, who if not our collective knows better how many and what kind of specialists to enlist for assistance in the various stages of developing the Tu-204, and for how long. Two authorities have actually been established: development of the aircraft has been entrusted to the Borispol Aviation Enterprise, but the VNPP, which is subordinate to the Ukrainian Administration, by the way, has received several million rubles for these purposes. Is it really normal that our collective does not know how preparation for the arrival of a new aircraft is being conducted, what has been done and what has not, and what the quality and results were in the coordination of actions by all the sides taking part in this task! Fog...

[Tishchenko] You know, this year and last year I have had occasion to be present for certain steps associated with the Tu-204's arrival in Borispol. The complexity of the problem was not concealed, measures were worked out, and in general the impression was created of movement toward a goal, even though a complicated one.

[Bondarenko] Obviously you observed fragments of the picture, and not the worst ones, either. We see the entire picture, and the opinion of my colleagues is even harsher—an organ has been created in the person of the VNPP which has established itself comfortably at the feeding trough and has begun its meal, but the calories that have been swallowed will exceed those that have been spent. It is convenient to extend such a life for decades by creating more of an outward appearance of useful work than engaging in it. On the one hand, we call for elimination of the obstructing components, but on the other hand we create them—such is the reality of the day. This error can be rectified only by the immediate transfer of all rights to our aviation enterprise.

[Tishchenko] I would like to get closer to something more specific—the preparation in the aviation enterprises' services. For example, to the one closest to you, the flight service.

[Bondarenko] There is nothing to boast about. The flight personnel are not accustomed to it, although this should have been undertaken a long time ago. After all, the Tu-204 is a fourth-generation electronic and digital aircraft, and it requires thorough theoretical and simulator preparation. A special "portrait" of a flight specialist, taking ergonomic requirements into account, is needed for it. And as long as 5 years ago we could have established an information science faculty under the KIIGA or the MIIGA [Kiev or Moscow Institutes of Civil Aviation Engineers] by making use of the experience in developing the Tu-154, the Yak-42, and the Il-86 and we could have developed good specialists by this time. But there was no faculty. The computer hardware with a data bank for air navigation was found not to be compatible with foreign models, either. How can we fly to other countries then, when we have to use a local information base there? How do we plan to sell the Tu-204 to other airlines?..

One of the plants has begun developing a simulator for the aircraft together with the KIIGA, but will this turn out well if the institute's specialists find themselves in unsuitable accommodations with no advanced equipment for their work?

Our specialists visited the KB [design bureau] recently, but they could have flown in the Tu-204 already!

[Tishchenko] I don't understand you somehow. Flight testing, but Aeroflot crews are on board?..

[Bondarenko] Let us remember that the Tu-204 promises more than 3,000 hours of operational flying time annually and fuel efficiency. The testing period can be shortened if the Aeroflot crews familiarize themselves with operational training earlier. With the exception of highly complex flights under extreme conditions, of course. This suggestion has come out of the design bureau: "Come here and study, pass your tests, and come on board!" But this is being impeded somehow.

They would have won on one point if they had anticipated the many shortcomings in construction with which series aircraft come to operations enterprises. It is no secret that a test pilot risks getting into trouble if he notes all the incompleteness in his log. Such actions are interpreted as an encroachment on the firm's honor. But then, the pilot is running no risk "from a machine tool" by recording the shortcomings.

[Tishchenko] Our conversation is depressing. Boris Viktorovich. So many hopes have been pinned on the Tu-204's appearance on the airways, but it turns out that only disappointments await us, isn't that so?

[Bondarenko] Unfortunately, there is nothing reassuring on the entire front. Construction of a new hangar at the Borispol Aviation Enterprise, the retraining of cockpit personnel, expansion of the air terminal, and making provision for flights and service—not even half of these matters have been resolved. This is the opinion of my

colleagues: unless radical changes are made in the organization of preparatory operations, down time and lengthy modifications for the aircraft, large financial losses, and complaints from clients are inevitable.

## MOTOR VEHICLES, HIGHWAYS

### Problems Plague Yelabuga Plant, Delay Car Production

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12 Sep 89 Morning Edition p 2

[Article by special IZVESTIYA correspondent A. Blokhin under "Details for IZVESTIYA" rubric: "'Oka' in Shallow Water: When the Production of the 'People's' Automobile Begins"]

[Text] Yelabuga, Tatarskaya ASSR—From the moment of the first articles about the "Oka," the new minicar of an especially small class, there has been no lessening of interest in it on the part of hundreds of thousands of motorists.

Above the asphalt highway linking Yelabuga with the construction site rises the main portal with a bright red inscription: "Yelabuga Motor Vehicle Plant" [YelAZ]. The local wisecrackers, when asked about things at the construction site, make a joke, saying that they put up the portal and everything else is on television.

Things are not going well. Judging by the monthly and weekly reports, the main facilities of the YelAZ receive about one-tenth the concrete that they need. They lack half the workers they need. It is difficult to connect this with what Sh. Idiatullin, first deputy general director of the YelAZ, says:

"The new management of KamGESstroy (a large-scale construction organization that built the Nizhnekamskaya Hydroelectric Power Plant, the giant plants of the KamAZ and the new city of Neberezhnyye Chelny, in which more than half a million people are already living—A. Blokhin) finally turned to us and we are finding understanding in high planning and supply organizations...."

It is clear that understanding alone is not enough. Action is needed. In this connection, the leading enterprises of the Volga Economic Rayon—the KamAZ, the Nizhnekamsknefteorgsin Association and the board of the motor vehicle plant under construction in Yelabuga—presented a tempting proposal. They proposed the establishment of a concern including the management of KamGESstroy, which would completely take over not only the construction of the new motor vehicle plant but to a considerable extent would put the newcomer on its feet. Look how much speaks "for" this case. The gigantic potential of the KamAZ would help to raise the capacity of construction subdivisions dramatically. This would

considerably diminish the problems with the manufacture of molds for reinforced concrete products, not to mention motor transport.

The KamAZ is transferring its plants to leasing. Tens of thousands of people will be released. They are skilled motor vehicle builders, who could now go directly to the shops of the YelAZ. Instead, the people in Yelabuga are contracting people in the old way, "from everywhere," as they say, sending them to different motor vehicle plants for on-the-job training.

Neftorgsintez. This is hundreds of rubber and plastic products, from tires to small gaskets, without which there can be no automobiles. In the scope of the concern, everything goes to the YelAZ, avoiding the multilayered system of planning and distribution....

The bureau of the USSR Council of Ministers for machine building discussed the idea of the concern and had a very favorable opinion of it. Nevertheless, the version of the Kamskiy concern did not come about. The fear of N. Pugin, minister of automotive and agricultural machine building, that in this way they would "destroy" domestic automobile building as a branch served as a counterargument.

Let us return, however, to the YelAZ. Despite all of the shortages here, they are trying to do everything possible. They are stepping up the construction of housing, and not just standard multistory bedroom houses. N. Mishchenko, deputy general director for construction, told with enthusiasm how in Yelabuga (which still did not exist anywhere!) they found a nontraditional way of resolving the housing problem that promises to be very effective.

They allocated a large tract of land for the building of family cottages. The government is taking over two-thirds of the loan and the rest is assigned to the builder with instalment payments over 15 years. One indispensable condition is personal participation in the construction of the housing.

The board of the plant under construction also intends a nonstandard solution to such a traditionally difficult problem as the provision of the enterprise with completing products. In the opinion of Sh. Idiatullin, the plant intends to develop its own interrelations with subcontractors on the principle of "competing suppliers."

...High-placed officials publicly declared on television and in the newspapers that 1991 is the year of the start of production of the Soviet "people's automobile." How can one relate to this period taking into account the realities of today? It is obviously impossible by that time to build a plant and related production systems, to finish the development work on the new minicar design (the "Oka" will not be the vehicle that we are accustomed to seeing in the pictures and it will also change its name), and to build an experimental model of the vehicle and test it. Extraordinary measures are needed. And if we

named the year 1991 not "in jest" and not so that our people can "live with more joy," it is necessary quickly to seal the contracts already planned with foreign automobile firms. Or honestly acknowledge still another unfulfilled promise.

## RAIL SYSTEMS

### Rail Freight Shipment Planning Evaluated

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[Article by A.G. Zakharov, professor, doctor of Economic Sciences, and G.P. Lemeschuk, deputy chief of the Planning Administration of the Main Economic Administration of the Ministry of Railways: "Making Transport Efficient Under Cost Accounting Conditions"]

[Text] The perestroika of economic management being carried out in the country requires a critical interpretation of many problematic economic questions. Among them is making freight transport efficient and distributing it by types of transport.

### The Main Reasons for Inefficient Transport

The problem of making freight transport efficient has become acute for the first time, in the period of the country's industrialization, when the inadequate development of transport, as compared with the growth rates of the entire national economy, has begun to be felt. Reducing unnecessary transport work has become, under these conditions, an urgent task, but not always, unfortunately, a realizable one. Work on making freight transport efficient has been going on for over 50 years. The amount of inefficient transport, however, is constantly growing.

The most intensive work on eliminating inefficient transport was done beginning with the Ninth Five-Year Plan. Measures to make freight transport efficient were being worked out at the Ministry of Railways and on the railroads. This work was headed and directed by the Interdepartmental Commission for Efficiency in Freight Transport at USSR Gosplan, founded in 1970. A procedure was worked out to approve measures for making transport efficient in accordance with the five-year plans, and they were more precisely defined by years in a cross section of the most important sectors of the national economy. Only in the 12th Five-Year Plan were assignments established for all the sectors of the national economy to reduce freight turnover of railroad transport through making transport more efficient in the amount of 110-120 billion ton-km.

Despite the work done at all levels of the administration, from USSR Gosplan and USSR Gossnab to the railroads, it was to a considerable extent impossible to eliminate inefficient transport. The main reason for this

was the policy carried out of establishing planned assignments for transport with respect to freight turnover and obtaining revenues from the level achieved, which included the inefficient transport fulfilled. To fulfill the plan, it was necessary to repeat them and surpass them. These trends were preserved even in the 12th Five-Year Plan. Today, however, the role of revenues is increasing in the economic work of transport. Low rates give rise to counter-flow, excessively long-distance and other inefficient transport.

We know that from 1950 to 1967, railroad rates were reduced by almost one-third, and have not been revised since 1967. At present the average revenue rate for all freight is 3.9 kopecks per 10 ton-km, and for hard coal—2.9, for timber and ferrous metal—2.7 kopecks, etc. This level of payment for transport is free for sectors of the national economy, and for the railroads, in many cases—unprofitable.

In this period, opposing processes took place in price formation for the sectors of the national economy. The wholesale price level in 1967 and 1982 was considerably higher, respectively for hard coal by 78 and 42 percent, for lumber by 34 and 40 percent, for iron by 70 and 20 percent, and for rolled ferrous metals by 43 and 20 percent. This led to a 2.5-fold rise in the wholesale price for hard coal, 1.9-fold for lumber, 2-fold for iron and 1.8-fold for ferrous metals. As a result, the relative proportion of the transport component in the final price for an industrial product has dropped substantially. For example, according to the calculations of A.V. Kreynin, doctor of Economic Sciences, the relative proportion of the transport component for hard coal dropped from 26.4 percent in 1966 to 10.4 percent in 1982. Considering the forthcoming rise in wholesale prices in 1990, it will drop to 7.5 percent. For lumber, the relative proportion of the transport component in the wholesale price for the period under discussion was reduced from 29.1 to 15.4 percent, and in 1990—12.6 percent. The situation is analogous for other types of products.

The low payment for transport creates an illusory concept of the cheapness of transport and contributes to the development of undue demands of the national economy for excessive intrasectorial and intersectorial delivery of products through cooperation. For example, The Chelyabinsk and Volgograd tractor plants send up to 1000 cars with T-200, T-130 and DT-75 tractors every year to Mozyr in the Belorussian SSR, to the Meliormash Production Association. The transport distances are 2680 and 1440 km. Blocks of trenchers, bush cutters and stumpers are installed on these tractors at the Meliormash Association. This equipment is then sent from Mozyr, in the opposite direction, to all the economic regions of the country. As we can see, the sectorial system of managing the national economy and the departmental approach to planning the supply with low payment for transport is aimed at increasing inefficient transport through the priority provision of its own enterprises with raw material and semimanufactures from the enterprises of its own department. The counter

flows of this product from other sectors that arise are not taken into consideration here.<sup>1</sup>

There are over 6000 plants producing reinforced concrete items and structures in operation in the country. Practically every oblast (kray) has one or several such plants. Their only difference is the affiliation of the plants to different USSR or union republic ministries. Because of departmental separateness, the reinforced concrete of the enterprises of one ministry is transported across the entire country to its subdepartmental building site. A different ministry organizes the transport of this product in the opposite direction.

The restrictions on the distance of reinforced concrete transport for general building purposes, now adopted by USSR Gosplan, of up to 700 km throughout the country, is not in effect, since transport is conditional on many "exceptions." Right now, over 34 million tons of reinforced concrete items and structures, or about 40 percent of the total volume of their shipment, are transported for a distance of over 700 km, and 13 million tons, or 11 percent of the reinforced concrete shipment—for a distance of over 2000 km. As a result, the average distance for reinforced concrete transport, given the constant increase in the number of plants, increased from 1975 to 1988 from 597 to 969 km, or by 372 km (62.3%), and the freight turnover—by 31.7 billion ton-km (60.3%). This swift growth in distances is completely unjustified, since the simple production of reinforced concrete can be organized with a restricted supply of cement and metal reinforcements practically everywhere.

There is a considerable amount of inefficient transport of a number of mass production goods.

**Hard coal.** Kansk-Achinsk coal is hauled from the Krasnoyarsk Railroad in the amount of 1.5 million tons to the Far East road for a distance of 3500 km. In 1989 it is planned to deliver about 1 million tons of this coal to consumers in the Ukraine. This is under conditions in which the consumers of Kansk-Achinsk coal in Central Asia and in the Ukraine are clearly drawn to the coal basins of the Angrenskoye deposit and the Donbass, located in the immediate vicinity.

The Gusinozersk GRES constructed in the Buryat ASSR was planned, in the estimate, to use local coal from the Gusinozersk deposit. At present, however, coal is hauled to this electric power plant from Krasnoyarsk Kray for a distance of over 1500 km, and the Gusinozersk coal, over 700,000 tons in volume, is hauled to Khabarovsk Kray for a distance of 3000 km to the Khabarovsk TETs-2, which is located in direct proximity to the Raychikhinskoye deposit. At the same time, it must be noted that when solving the problems of developing KATEK [Kansk-Achinsk Fuel-Energy Complex], local consumption of coal from the Kansk-Achinsk deposits was planned.

The major coal supplier in Siberia is the Kuznetsk coal basin, whose area of supply is being yearly expanded and has now practically encompassed all the regions of the

country. Kuznetsk coal is hauled on all the roads and in many cases, coal from the Ekibastuz, Karaganda, Angrensk, Donetsk, Pechorsk, Chelyabinsk, Kansk-Achinsk, Neryungri and other deposits runs in the opposite direction.

**Petroleum and petroleum products.** Despite the introduction in the 1970's and 1980's of a number of petroleum refineries, beginning in 1985 the average distance for transport of petroleum products has been continually increasing, and in 1988 reached 1103 km, or increased by 69 km. Specifically, the average distance of petroleum freight transport from the filling points of the Kuybyshev road reached 1600 km in 1988 and increased by 150 km as compared with 1985. Petroleum processing at the Kuybyshev petroleum refineries is increasing, and is not being reduced at the Bashkir refineries. The assortment of products produced at these enterprises is exported to all the roads. This is the result of the existing shortcomings in specialization of petroleum refineries, production of goods by assortment, attaching the suppliers to the consumers, underutilization of the potentials of various types of transport and the imperfection in supply planning by the petroleum marketing organizations.

The area of consumption of furnace fuel oil from the Bashkir refineries in the regions of Western and Eastern Siberia, Kazakhstan, Central Asia and the Urals has expanded to a distance of 3000-3500 km. These transports make up over 50 percent of the total pouring of furnace fuel oil for these enterprises. The average furnace fuel oil transport distance rose by 65 km and reached 915 km, and the unnecessary transport expenditures for the national economy were 36 million rubles.

Using railroad transport to ship petroleum freight for short distances continues to be extremely inefficient. The lack of an adequate number of motor vehicle trestles for pouring the petroleum products, and of distribution product lines considerably increased the number of pouring points. For individual points the pouring is 2-5 tanks a day, and transport by railroad is carried out for a distance of from 20 to 100 km.

**Iron ore.** Most of the inefficient transport of iron ore is entailed in the delivery of raw material to consumers in the Urals and Western Siberia. Some 1.4 million tons of iron ore pellets are transported from the Lebedin GOK [mining-enriching combine] to the West Siberian Metallurgical Combine, 4000 km away, and 1 million tons—to the Karaganda Combine, 3200 miles away. At the same time, over 8 million tons of pellets are sent in the opposite direction to the Magnitogorsk Metallurgical Combine from the Sokolovo-Sarbay GOK. Over 1 million tons of pellets go from Karelia, from the Kostomuksa GOK, to the Urals for the Orsko-Khalil Metallurgical Combine, almost 2000 km away.

**Timber freight.** The average timber transport distance in 1988 was 1748 km, and increased by 49 km over the level reached in the 11th Five-Year Plan. At the same time, freight turnover increased by 7.8 billion ton-km

and transport costs rose by over 30 million rubles. The Sverdlovsk and East Siberian roads ship timber to the entire network in the amounts, respectively, of 13 and 10 million tons, and at the same time, 0.4 million tons of timber from 31 roads goes to the Sverdlovsk road, and 1.6 million tons go from 17 roads to the East Siberian road. In particular, 1.2 million tons of rough logs are sent yearly from the Oktyabr, Baltic, Belorussian, Moscow, Gorkiy, Northern and Sverdlovsk roads to the Central Asian, West Kazakhstan, Tselina and Alma-Ata roads, at a distance of up to 4000 km, to meet the mass timber transport from the Krasnoyarsk and East Siberian roads, in the amount of over 4 million tons, to the Dnepr, Donetsk and North Caucasus roads.

Some 200,000 tons of saw logs are transported from the Sverdlovsk road to the Transbaykal road and, at the same time, they are transported from the Baykal-Amur and East Siberian roads to the Sverdlovsk. As a result, the additional transport work constitutes 1600 million ton-km, and the transport costs—6 million rubles. In the course of the last 10 years, there has been counter transport of pine saw logs for a distance of 506 km within the range of the Sverdlovsk road, particularly from the Ivdel-Ob and Tavda-Ust-Akha sections, designated for Bogdanovich-Tyumen-Ishim, to the Ishim Furniture Factory and the Yalutorovsk Lumber Yard, in the amount of up to 230,000 tons, to meet the mass transport of rough logs from the Krasnoyarsk and East Siberian roads to the Moscow, Gorkiy, Southwestern, Lvov, Odessa and Moldavian roads.

Up to 200,000 tons of timber are transported from the Northwestern region of the country to Uzbekistan, up to 4000 km away, to meet the timber transport from the East Siberian road to the North Caucasus and Transcaucasus roads. Here, the additional transport work constitutes 800 million ton-km, and the transport costs—3.1 million rubles. Every year, 280,000 cubic meters of processed wood chips are transported from the Krasnoyarsk road to the Bratsk Lumber Complex, to meet the flow of unprocessed raw saw log material sent from the Bratsk division of the East Siberian road, amounting to 2.2 million tons a year to the Central Asian, Tselina and Alma-Ata roads. It must be noted that the production capacities for the output of lumber in heavily forested areas are only 87 percent loaded, and an 8-10 percent increase in the capacity load will make it possible to increase the output of lumber by 3.1 million cubic meters and reduce the railroad transport by 5 million cubic meters.

#### The Directions of Work on Saving Transport Costs

In transport work, energetic efficiency in freight transport, with complete economic calculation, is giving way to the long-term directivity of the measures being worked out to improve the location, specialization and cooperation in production, i.e., there must be calculation not only of transport, but also of production factors, which affect the entire complex of production-transport costs for the product consumer. At the same time, the

transport component of the aggregate costs of product transport consists of two groups of production expenditures, namely those related to locating enterprises being newly built, specialization and cooperation in production, product enrichment, changing the technological processes and replacing equipment in order to save transport expenditures, and those stemming from the procedure adopted to attach the product consumers to the suppliers and the existing system of planning freight transport.

Working out and carrying out the measures of the second group does not as a rule require capital expenditures, but ensures saving them, because of the reduction in transport volume. The first group of measures, however, always requires additional investments in the corresponding production sectors, and in some cases, in transport as well (for example, to ensure transport in special rolling stock). Therefore, the measures of the first group should be regarded as long-term, which can be realized in the course of a prolonged period of time (in one or several five-year plans).

In consideration of the proposed division of measures to reduce transport costs into two groups, conventionally grouped under the title of "production factor" (first group) and "improving the planning of supply and transport" (second group), measures on making transport efficient were analyzed and scientific research was done in conjunction with scientific research organizations. Specifically, the Department of Economics of the All-Union Scientific Research Institute of Railroad Transport (VNIIZhT) made a special study of the volumes of inefficient transport operations in railroad transport, using data from the Ministry of Railroads, USSR Gosplan, USSR Gossnab, the IKTP [Institute of Comprehensive Transport Problems] at USSR Gosplan and the NIIMS [Scientific Research Institute of Economics and Material-Technical Supply Organization] of USSR Gossnab. Industrial sectors were studied—coal, chemical, ferrous and nonferrous metallurgy, timber, building materials, reinforced concrete items and structures, food, petroleum and petroleum refining. Measures to improve the transport of agricultural goods, expand the direct long-term economic relations for supplies of industrial products and use the country's unified transport network efficiently were also examined.

The VNIIZhT study showed that the total volume of inefficient transport is now 421 billion ton-kilometers (10.1% of the total 1987 freight turnover). Of them, 127 billion ton-km (3.3% of the total freight turnover) can be eliminated through improving the planning of supply and transport. The rest of the inefficient transport (294 billion ton-km, or 6.8% of the total freight turnover) can be eliminated only through major capital investments in the production sphere—organizing new production facilities, reorienting specialization and cooperation of enterprises, changing industrial processes and a number of other measures, which is essentially specified in the measures to make transport efficient, approved by USSR

Gosplan and USSR Gossnab for the future, beginning with the current five-year plan.

In accordance with this, the potential reserves for saving transport costs in the national economy were also determined. They constitute 1356.8 million rubles under present conditions. Of them, 512.3 million rubles (37.8%) can be saved through organizational factors (planning supply and transport). The remaining 844.5 million rubles of transport cost saving can be achieved only after carrying out serious restructuring measures in the sectors of the national economy, encompassing not only the location, but also the specialization and cooperation of enterprises and a change in the industrial processes, taking the transport factor into consideration. These measures require the corresponding capital investments in the production sphere.

Of the sectors examined, the building materials industry has the greatest reserve for reducing transport costs (203.7 million rubles). Merely through eliminating unnecessary long-distance transport, costs can be reduced by 200.2 million rubles. The new construction of facilities in the sector, allowing for the transport factor, will in the future make it possible to bring the savings in transport costs to 285.2 million rubles.

The coal industry is the second most important sector with a large reserve for reducing transport costs (196.5 million rubles). Measures directed toward reducing unnecessary transport work include eliminating the shortcomings in attaching consumers to suppliers (59.8 million rubles); burning coal at electric power plants located in the eastern regions and transmitting electric power to the European section along electric power transmission lines (38.4 million rubles); enriching the coal (reducing the ash content) (35.4 million rubles) and reducing the outlay of fuel energy resources (29.5 million rubles); changing the fuel conditions of electric power plants (20.6 million rubles); reducing the loss of coal during transport through the use of protective films, roller compactors and other measures (11.8 million rubles). It should be noted that only 59.8 million rubles of saving can be obtained without additional one-time expenditures. In the long term, the total saving can reach 248 million rubles. The overall amount of saving in transport costs is 112.9 million rubles for the coal industry (in the long term 161.4 million rubles). Of all the measures, only the first one mentioned above (through eliminating the shortcomings in attaching suppliers to the consumer) does not require additional capital investments in the sector.

Reducing transport costs in the ferrous and nonferrous metallurgy industry can be achieved through carrying out measures to eliminate the shortcomings in attaching the consumer to the suppliers (26.5 million rubles); ensuring supply from metallurgical plants adjacent to the consumer (17.3 million rubles), eliminating the shortcomings in the specialization of rolled metal (24.8 million rubles); increasing the agglomerate production capacities in the regions of the Urals and Siberia (12.7

million rubles); comprehensive introduction of production capacities (26.6 million rubles); increasing the iron content in commercial ore (5 million rubles).

A substantial saving in transport costs can be achieved for the petroleum and petroleum refining industry—112.7 million rubles (in the long term—144.2 million rubles), including savings through organizing production (84.2 million rubles); regional choice of points and zones for spraying routes with cargo oil (19.4 million rubles); eliminating the shortcomings in attaching consumers to suppliers (9.1 million rubles). Of the entire possible saving in transport costs, the largest part of it (84.2 million rubles) is being achieved through additional investments.

The timber industry has considerable reserves for reducing transport costs—84.7 million rubles (in the long term—135.5 million rubles). For this, it is necessary to eliminate the shortcomings in attaching consumers to suppliers (2.8 million rubles); improve production organization (3 million rubles); organize sawmill operation at procurement sites (78.9 million rubles). Of all the measures, only eliminating the shortcomings in attaching consumers to suppliers does not require additional capital investments. Reducing unnecessary inefficient transport operations in railroad transport for agricultural freight, reinforced concrete, chemical and food industry items will ensure a saving of 1.8-46.2 million rubles (in the long term, from 2.2 to 78.5 million rubles).

Each sector of industry is characterized by its own specific measures to reduce transport costs. The only one common to them is eliminating the shortcomings in attaching the consumers to the suppliers. At the present stage, this problem is being solved by systems for norm-set freight-flow directions. Under the new conditions of economic activity, however (introducing cost accounting and wholesale trade), there is an urgent need to review the actual methodological premises of drawing up systems for norm-set freight-flow directions and to construct them on the basis of the probability approach, allowing for the fluctuation in demand for the products, stemming from their qualitative characteristics.

One of the substantial reserves for saving transport costs is improving the direct long-term economic ties and efficient use of the country's unified transport network. A considerable reduction in transport expenditures entails the optimum distribution of transport among its various types. It has been calculated that through shifting freight transport to direct water, direct railroad or direct mixed railroad-water service, 17.3 million rubles can be saved; switching inefficient short-run transport from railroad to other types of transport (motor vehicle, special continuous operations)—150 million rubles; by using hydrotransport to transport coal for long distances in balancing Kuzbass-Urals and Kuzbass-Center—240 million rubles.

Implementing these measures will make it possible for railroad transport to save 403.7 million rubles, and in

the long term—482.3 million rubles. In this case, the use of hydrotransport for long distances alone will require sizable capital investments. Short-run shipping should be developed only by motor vehicle transport for general use. This is because labor productivity in this form of transport is 1.5-fold higher, the transport cost 40 percent lower and the fuel consumption 15-20 percent less than the departmental.

### A Change of Approach

The new conditions of economic activity require a radical revision of the nature of work on making transport-economic relations efficient. We should not close our eyes to the fact that inefficient transport is in many ways governed by the work of USSR Gosplan, USSR Gossnab and the ministries and departments, as well as that of the shipping enterprises and the recipients. Freight transport is carried out in full accordance with the plans for material-technical supply (supply of products) which, in turn, are subject to the effect of the existing (as planned) location, specialization and cooperation in production. The original cause here is the production plan and the product supply plan. Transport takes on the role of executor of the transport ordered by the consignors in accordance with the supply plan.

In relation to this, posing the question of changing the term "making freight transport efficient" and replacing it with the term "making product supply efficient" is in accordance with principle. This will, in our opinion, correspond fully to the work conditions of all the enterprises based on principles of full cost accounting under the action of the USSR Law on the State Enterprise (Association), which gave the product-consuming enterprises the right to choose and change product suppliers at their own discretion.

Moreover, the development of wholesale trade will lead to "washing away" the concept of making freight transport efficient, and will turn it into a secondary derivative concept of the concept of "making product supply efficient."

The transition to wholesale trade also requires putting order into the supply of products in the national economy and improving the system of material-technical supply for the enterprise, for the purpose of a major reduction in duplicate and other inefficient transport. Above all, the concern should be with putting order into the flows of raw material, semimanufactures and completing items. The saving of raw material resources in this direction should be specified in production. For example, in the United States, for each ton of manufactured products, only 1.5 tons of raw material and semimanufactures are transported, while in the USSR it is 3-4 tons, i.e., over twice as much.

Improving production technology, directed toward reducing the specific material expenditures per unit of manufactured product, is a major reserve for reducing unproductive transport work in the country. For example, we take up 200,000 cars, 4000 locomotives and

consume 1.5 million tons of diesel fuel and 8 billion kw-hrs of electrical energy on "unproductive" transport of inert admixtures (rock, earth in ore and hard coal). At the same time, abroad, railroads are not permitted to transport unenriched natural resources. This is to a considerable extent because of the high charges for transport. The low price of railroad transport in our country, however, in most cases leads to uncontrolled expenditure of funds for unnecessary, economically unjustified, inefficient transport.

In 1960-1986, the specific transport costs for handling, per ton of national economic products, rose from 4.7 to 10 rubles, i.e., more than doubled. On the whole, however, transport costs for the national economy in 1988 were 135 billion rubles. In the future, allowing for the forthcoming change in wholesale prices and rates in 1990, yearly transport costs will increase to 210-215 billion rubles.

Because of putting into effect the USSR Law on the State Enterprise (Association), with the transition of the entire national economy to full cost accounting and self-financing and the introduction in the 13th Five-year plan on a wide scale of wholesale trade through production funds, work on making product supply and the freight transport related to it more efficient should be radically reorganized. In our opinion, long-term planning, location of production, its specialization and cooperation in consideration of the transport factor and above all, reduction of inefficient transport-economic relations should be concentrated in USSR Gosplan and USSR Gossnab. This work should be performed by means of a council for the study of productive forces, the Scientific Research Economic Institute of USSR Gosplan and the Scientific Research Institute of USSR Gossnab.

The function of the current planning and efficiency of supplying products for production purposes should be the prerogative of the state enterprises (associations) and organs of material-technical supply. To put order into this work, a system of territorial balance of production and distribution for all types of products should be put into practice in planning the supply of products (transport) for the oblasts, krais, union (without oblast division) and autonomous republics, for the purpose of priority provision with products at the sites and determination of the amounts of export and import of a given product. Working out the balance in consideration of all the enterprises located in a region must be entrusted to the oblast and kray planning committees of the union (without oblast division) and autonomous republics, USSR Gossnab and the ministries and departments working out plans for product supply. Data on the territorial balances can serve as the basis for forming, on a new probability methodological basis, systems for the norm-set directions of freight-flows, which should be presented upon approval to the Ministry of Railways, and on transport within the boundaries of the railroads—to their administration.

We know that rejection of the basic planning and evaluating indicators of railroad transport operations—the freight turnover and transition to the indicator of dispatching freight—did not contribute to putting order into economic relations and making freight transport efficient. The existing indicator is hardly reflected in the measures being carried out to make freight transport efficient, with the exception of eliminating duplicate transport. Under today's conditions of operations and with a view to creating incentives to eliminate the entire list of inefficient transport, there must be a return to the earlier existing indicator of freight turnover, and the system of allocations to the economic incentive funds should be coordinated with it.

In the production sphere (beyond the limits of transport), there should be a major solution to the long-term problems of making the freight-flow of raw material, materials and completing items efficient. Here there should be a revision of the fuel regimes of electric power plants, boiler enterprises and organizations, allowing for the use of nearby fuel-energy resources, and a program should be worked out and implemented for construction of scrap metal processing shops, fitted out with the necessary equipment, and ensuring processing and preparation for transport of all scrap metal, and of small-capacity metallurgical plants at sites where ferrous scrap metal is formed and metal products are consumed.

For enterprises of the machine building and metallurgical complexes, there must be, in conjunction with the interested ministries, a revision of the structure that has formed for specialization and cooperation in the production of goods in machine building, metallurgical and metal machining industry and instrument making, and measures should be carried out to put in order the supply of machines, completing parts and other goods and to change specialization. For fuel-energy, chemical-timber complexes and ferrous and non-ferrous metallurgy, measures should be introduced to increase and intensify the processing of timber and petroleum, increase the content of useful substances and reduce inactive and other admixtures in fuel, ore and fertilizers, extract components from the ore extracted, increase the content of iron, manganese and chromium in converters, develop the technology of enriching and pelletizing iron quartzites on an industrial scale and improve the use of wastes. Measures should also be carried out to increase the extraction of coking coal in the Donbass and cease their export from the Kuzbass and Karaganda to the metallurgical plants of the Ukrainian SSR.

For a long time there has been no solution to the problem of specializing metallurgical enterprises for rolled ferrous metals, to satisfy fully the demands, gravitating toward the corresponding enterprises in the regions and toward reducing the import and export of the same types of products, through comprehensive development and reorganization of production capacities and simultaneously putting them into operation at metallurgy enterprises, increasing the capacities for extraction of iron ore in the Urals, and for construction and introduction of

new mining-enriching combine capacities. In order to reduce unproductive transport operations, there must be a purposeful program to change the specialization of petroleum refineries, calculated to provide for the maximum demands of the economic regions being drawn to them. Comprehensive measures to eliminate inefficient supply of petroleum products and reduce inefficient transport should be worked out on the basis of this program.

The USSR Ministry of Grain Products must implement measures to construct elevators, drying capacities and grain-storage warehouses, and processing enterprises in the regions of its procurement, to locate enterprises of the milling industry and grain plants at the centers of consumption of their products and to increase grain drying capacities in the areas where sunflowers, corn and rice are cultivated. Work on making agricultural supply and transport efficient should be done by the councils of ministers of the union republics and other departments participating in this. This includes, specifically, organizing the production, procurement, storage, processing and selling of fruit and vegetable products and potatoes; construction of cold storages, storages and receiving and procuring centers for processing enterprises and shops, primarily at the places where fruits and vegetables are produced.

Two groups of measures are specified for construction freight—centralized and local. The first group includes measures gravitating toward USSR Gosstroy, and a set of measures must be carried out to establish specialization in the production of reinforced concrete items and structures for full satisfaction of the need and elimination of export and import of reinforced concrete from the same economic regions of the country. The second group of measures includes the sphere of activity of the territorial organs—councils of ministers of the union republics, krayispolkoms and oblispolkoms—and relates to intensive use of local raw material, expanding enterprise specialization, intensifying the production of building materials (extracting non-ore building materials, producing reinforced concrete structures and items and other wall materials) which are in short supply in the republic, kray or oblast.

The list of measures presented to ensure putting order in economic relations and reduce inefficient supply (transport) does not fully encompass all the possible measures. Therefore, there must be a special program to calculate the transport factor in location, specialization and cooperation of production, planning product supply and organizing direct long-term economic ties.

#### **Economic Levers**

Under today's conditions, the situation related to carrying out measures to make freight transport more efficient has changed radically. The right of consumer-enterprises to choose the supplier is being realized. The resulting cost indicators for compilation of the production effect from the products selected and used in

production and the possible losses from increasing the transport distance of these products are now acquiring great significance. It is clear that transport costs in this case will grow because of the increase in operating expenditures, one-time outlay in rolling stock and reduction of the reserves for throughput of the sections and routes, which is equally an unnecessary expenditure of capital investments. Because of these additional expenditures for supply of products, inefficient for the national economy, the enterprises requiring them should be fully compensated for transport. This requires conditions of full cost accounting and self-financing.

Who, to what extent and how should compensation be made for these excess expenditures for transport? Unquestionably, the enterprises consuming the product should compensate for excess transport expenditures, since only they, in accordance with the Law on the State Enterprise (Association), enjoy the right to choose the product supplier, which ultimately determines the size of the transport costs in the sphere of circulation for supply of the enterprises. With this procedure, attaching consumers to product suppliers, which ensures the minimum production-transport expenditures, will be the variant, efficient for the national economy, for organizing transport-economic relations between enterprises. The requirement for systems of norm-set freight-flow routes will essentially change. They can have no "rigid" assignment of stations and sections to each other for the purpose of attaching consumers to suppliers. Definite location zones of the suppliers should also be recommended for the consumers of a certain area, on the basis of probability methods of calculating the optimal freight-flow systems. This should also pertain in full measure to the choice of direct long-term economic relations (PDKhS), which should be directed toward concluding contracts for the supply of products in accordance with stable relations in the optimal plans.

The system of economic incentive for efficient product supply (freight transport) should be used when PDKhS is organized between consumers and producers. This system should extend to efficiency of material flows in the spheres of production-supply, marketing and transport. Efficiency in moving material flows is possible only with the development of advanced forms of material-technical supply. Therefore, establishing PDKhS should be accompanied by a rise in the role of measures directed toward eliminating inefficient transport of all types. When it is impossible to eliminate them, additional expenditures for inefficient transport should be compensated, not only for transport, but also for enterprises which, because of attaching other consumers of the given product to the suppliers, which is inefficient for the national economy, will incur additional expenditures.

All this leads to unnecessary expenditures in the transport sector and national economy as a whole. For example, in railroad transport, with unchanged amounts of shipment, the transport need is increasing, as compared with the optimum plan (systems of norm-set freight-flow routes), the technical-economic indicators

for use of rolling stock are deteriorating, and there will be an unnecessary load on the throughput capacities of the sections and stations. In the end, a certain tension will be created in the operational work and fulfillment of the plan for freight transport.

The reason for the unnecessary transport operations (with increased expenditures) for transport organizations is the choice made by the consumer-enterprises of the economic ties with product suppliers (in accordance with the Law on the State Enterprise). In this case, transport should be compensated for its excess outlay for operating expenditures and capital investments. Compensation to the roads for excess expenditures for transport when using the right of the consumer-enterprise to choose the supplier in violation of the norm-set routes for freight flows should be made in accordance with the higher contractual rates established on the basis of the cost indicators (expenditures and capital investments) for specific transport conditions, calculated by using the appropriate methods and norms.

There are various points of view on the level of contractual rates for payment for inefficient freight transport. In the opinion of some specialists, their level should exceed the ordinary rate by a factor of 1.5-3, but others recommend increasing the payment by the clientele for inefficient transport, using gondolas and flat cars, by a factor of 5-6, and for closed cars and other rolling stock, by a factor of 3-4. These amounts of increase in the contractual rates for inefficient transport can be regarded as the basis for forming these rates. It seems that at the first stage of working out a system for contractual rates for inefficient transport, raising the usual tariff by a factor of 1.5-3 deserves preference, since it is customary to consider that the volume of inefficient counter transport is usually twice as high when calculating for the minimum flow in the opposite direction.

Payment for freight transport, within the limits of an efficient marketing area for the products, is made according to a general rate, and for transport outside the limits of this area—at higher (contractual) rates. The additional expenditures for transport, formed through the use of increased rates, should be directed to the fund for the development of production, science and equipment of the roads and the Ministry of Railways. Establishing this procedure may be furthered by amassing capital investments to acquire an additional fleet of cars and locomotives and the development of the throughput of sections, which is extremely necessary, since under the conditions of the effect of full cost accounting, the railroads should operate under conditions of satisfying the demands of the clientele "for offering freight." As a result, an additional investment source for financing the development of the material base will be formed in railroad transport, through the accumulated funds of the clientele for payment for inefficient transport.

A different procedure should be used with respect to the transport costs saved from making freight transport efficient and carrying out measures for effective use of

the technical resources of transport. Here the system of material incentive for transport workers, and industrial and supply-sales organs should be used to carry out these measures. Organization of this system should be constructed by analogy with the existing system of giving incentive to specialists for saving fuel, electric power, metals and other resources in short supply, as well for reducing the cost of the products and increasing labor productivity, developing and introducing advanced technology, new equipment, etc. All these measures are ultimately directed toward intensifying national production and a steady reduction of labor input per unit of goods produced.

The main purpose of making economic ties between enterprises efficient is to save transport expenditures through eliminating unnecessary transport of products. The practical realization of these measures, however, is directed toward saving all resources, including transport resources. Here, in a number of cases the saving may be obtained without additional capital investments. Therefore, the effect obtained from making freight transport efficient can be equated to the effect from measures to save material, energy and labor expenditures. For economic incentive to work on making freight transport efficient and improve the use of rolling stock, withholding in a certain amount from the saving obtained in transport expenditures may be stipulated for the economic incentive funds (FES) of the roads, industrial enterprises and organs of material-technical supply. The collectives of transport enterprises, industry and supply specialists should be awarded bonuses through this fund.

The system of calculating the economic effect obtained from making transport efficient, and deductions from it to the FES should be specified in the course of reforming the economic mechanism of the sectors of the national economy. The economic effect can be accumulated, depending on the system used for prices in the supply-sales organization—a "free-station of destination" and, for the freight recipient—a "free-station of dispatch." In this case a purposeful FES for specialists working out efficiency measures should be formed at all enterprises of industry and transport and supply-sales organs.

The main prerequisite for work on reducing inefficient transport and saving transport costs is the organization and ordering of their accounting. Offering the enterprises free choice of the suppliers of raw material and completing items, and the transition to wholesale trade by means of production funds, requires a review of the former concepts of planning, norm-setting and calculating transport costs. For example, there is no longer any need to put into effect a number of recommendations for planning and calculating transport costs, as factors opposing the economic independence of the enterprises. This includes the proposal on planning transport costs for the ministries and departments. At present, only the enterprise (production association) can plan transport costs. In consideration of this circumstance, in the transport component of wholesale prices, the increasing role of the enterprise-consumers of raw

material and materials should predominate and even become the only form of accumulating transport costs on the basis of the "free-station dispatch" price. In this case, all the existing transport costs will be included in the cost of the product.

Carrying out economic measures and economic interest in efficient transport relations is becoming an urgent factor in the transition of the republics to regional cost accounting.

#### Footnote

1. See ZHELEZNODOROZHNYI TRANSPORT, No 1, 1988.

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#### Perishable Food Rail Transport Problems Cited

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[Article by A. Poplavskiy, department head at the All-Russian Research Institute for Rail Transport and candidate of technical sciences; A. Kokovikhin, laboratory chief and candidate of technical sciences; I. Yekimovskiy, leading scientific associate and candidate of technical sciences; and V. Panferov, senior scientific associate and candidate of technical sciences: "Cold on Wheels Today and Tomorrow: A View of the Problem"]

[Text] Rail transport delivers about 55 percent of perishable output. This is only 3 percent of total freight turnover. But operational expenditures exceed 10 percent and the cost of products in the process of transportation amounts to more than 20 percent of the cost of the entire freight volume in rail transport.

Losses from the reduction of quality and spoilage of fruit and vegetables are enormous. The loss of just 1 percent costs the national economy 0.5 billion rubles. The reason for such a situation, in our view, is found in three closely related problems.

The first and main problem is that the basic principle of the current transport system is the increase in the size of the car park to a level ensuring the full coverage of the seasonal maximum volume of conveyances. At the same time, we are perceiving an acute shortage of rolling stock during this period and nonproduction idle time during the rest of the year. Thus, up to 5,000 refrigerator cars stand idle on the Azerbaijan Railroad during April and May. The picture is analogous for the Central Asian Railroad. Expenditures just for the technical servicing and maintenance of the crews of the refrigerator sections for these railroads over 2 months amount to about 10 million rubles. That is, on the one hand, almost half of the perishable freight has to be transported in ordinary covered cars because of the shortage of specialized isothermic rolling stock and, on the other hand, a huge number of refrigerator cars stand idle in reserve because of the lack of output.

The loading and especially the unloading of perishable freight are extremely dispersed, which leads to significant expenditures of the time and resources of railroad workers in the organization of routes and in delivering to consumers. For example, 2,900 stations ship potatoes, 2,600 ship vegetables and fresh cabbage, 2,200 ship canned food, etc., and just as many unload them. The dispersion forces a five-car refrigerator section to provide for loading at two or three places. In addition, a significant share of the stations where they process cars with perishable goods are not very busy and do not have the necessary technical equipment. This is why the production cost for the processing of 1 ton of freight there is five to seven times average. The control of the quality of the output is greatly complicated. Idleness of rolling stock under freight operations is 1.5 to 2 times standard.

As a rule, the enterprises of the former Gosagroprom, Ministry of the Fish Industry and other ministries and departments do not have stationary cold storage and stations for preliminary cooling. For this reason, they load the output in an unprepared form, cooling it en route. But the cost of the production of cold under transport conditions is 5 to 10 times higher than in stationary facilities.

The essence of the second problem is that the design of the isothermic rolling stock does not fully meet operational requirements. It is complex in its technical servicing and the work of equipment is not sufficiently automated.

The opinion long prevailed that the structure of the refrigerator park must include no less than 65 percent single cars. The remaining portion is group rolling stock (primarily 5-car sections). Accordingly, large batches of autonomous refrigerator cars (ARV) have been purchased abroad. But unforeseen difficulties arose in the course of operations under the specific conditions of the railroads of the Soviet Union: the equipment required frequent and labor-intensive technical servicing and turned out to be less economical in comparison with refrigerators in the multiple-car version (the production cost of the transport of perishable food in ARV's is 10 to 15 percent higher than in a group system). The result is the reduction and then the complete stopping of their deliveries.

But the single cars are needed and a contract is being made with the GDR for the delivery of several thousand thermos cars. In principle, we do not want to subject these purchases to doubt. But one must not forget that the thermos cars are not universal and are most efficient only in the transport of thermically prepared loads over relatively short distances. We have no stations for preliminary cooling and the average distance for the conveyance of perishable food is about 3,000 km. So it is most probable that problems will arise with these cars as well.

The same doubts can be expressed with respect to the prospects for the use of the cars with liquid-nitrogen cooling now under development at the Bryansk Machine Building Plant. One cannot transport frost-sensitive

loads in them under winter conditions, for there is no heating system. And the main thing is that their operation requires the establishment of a special network of centers for technical servicing and outfitting. In other countries (in the United States, Western Europe and the GDR), they long ago came to the conclusion that, as applied to rail transport, cooling with liquid nitrogen will not be competitive with traditional cooling in the foreseeable future.

The question of the "revival" of refrigerator cars is raised periodically. But practically their entire base (ice-making plants and centers) has been eliminated and therefore we have to start from zero, which requires substantial capital expenditures. At the same time, transport in refrigerated containers, widespread in all highly developed countries, is acknowledged in a number of domestic studies to be economically disadvantageous. But there is experience in the operation of a transport route between Finland and Hakhodka using refrigerated containers. Such transport showed that their utilization on Soviet railroads is not only realistic but also profitable.

Finally, the third problem is the technical state of refrigerated rolling stock. Unfortunately, its servicing is far from perfect. The pace of the development of the repair base and introduction of intensive technological processes into practice is lagging behind the increase in the delivery of cars. The relative amount of repair work is increasing every year. The production cost of the normalization of the rolling stock has increased by a factor of 1.8 over the past 5 years. The depots are poorly supplied with spare parts, subassemblies and materials.

What are the prospects? For by 1990 the volume of transport of agricultural output must increase by 50 to 60 percent and by 170 to 180 percent by the year 2000. Many specialists think that we should go the traditional way, that is, increase the park of isothermic cars in proportion to the volume of output. But its continuous growth without the corresponding development of the track system, improvement of the control and increase in the speed of movement, and development of the infrastructure of agricultural enterprises—mechanization of loading and unloading operations, storage and sale of output, etc.—will inevitably lead to a further reduction of operational indicators. There will be an increase in the turnover of cars and a reduction of productivity in connection with the extreme load on the sorting stations.... In addition, there will be increased expenditures for technical servicing and repairs and the number of service personnel will increase. Even after the transition to the servicing of refrigerator sections through reduced crews, the annual increased need for mechanics will amount to more than 2,000 people. This is the path of extensive development.

A fundamental improvement in the transport of perishable loads can be achieved by radically changing the existing principles. From our point of view, the most rational scheme is one in which the largest part of the

freight will be stored at the production sites and will be presented for transport when its sale at the places of consumption is possible immediately or in a very short time after delivery. The foundation here must be the unified transport and refrigeration system (YeTKhS). Its basis could be large-scale distribution refrigerators and preliminary cooling stations located in accordance with the regional principle (one to five refrigerators per republic, kray or oblast) at the places of mass procurement and, to a lesser extent, at the places of the consumption of food output. Under such a structure, refrigerated rail transport can ensure the even transport throughout the year of large lots of perishable loads over great distances, that is, implement interregional ties. Intraregional deliveries are thereby possible through isothermic cars and refrigerated truck transport.

At first glance, the realization of the system requires substantial capital investments in stationary refrigerator capacities. But preliminary calculations show that in connection with the reduction of the size of the park of isothermic cars (it is unavoidable under this system) and, accordingly, of expenditures for their acquisition, technical servicing and repair, the establishment of a YeTKHS will not bring about additional expenditures. And its introduction provides a significant economic effect.

To a considerable extent, the YeTKhS will also determine the demands on the management structure and design of refrigerator cars, will ensure an increase in labor productivity in servicing and repair by a factor of 1.5 to 2, will diminish the annual volume of repair work by 12 to 15 million rubles, will reduce the production cost of deliveries by a factor of 2 to 2.5 and will eliminate the seasonal nature of transport.

Considering the interbranch nature of this system, research is necessary on its establishment at the level of the State Committee for Science and Technology and USSR Gosplan. This was mentioned in the report of the All-Union Research Institute for Rail Transport at the section of the scientific council of the State Committee for Science and Technology on the problem of the "Comprehensive Development of Transport" back in 1984. But there was no further development of our proposal.

At the same time, regardless of the resolution of the question on the YeTKhS, it is already necessary to carry out a system of measures that can be effective and above all accelerate the establishment of new types of isothermic rolling stock of a unified design not requiring repair.

The All-Union Research Institute for Rail Transport has developed "Technical Requirements" on a standard technological process for the continuous depot repair of refrigerator cars utilizing diagnostic means and corresponding to the principles of the concentration of production. The expected annual economic effect from its introduction will be no less than 4 million rubles just for a five-car section.

Develop and introduce a comprehensive system for the control of the technical state of isothermic rolling stock throughout its entire service life. Establish a special testing complex including a universal climate station for the testing of new models of rolling stock.

It is necessary to evaluate the results of the labor of those involved in the delivery of perishable freight on the basis of economic indicators—according to the amount of income or profit from transport per worker, for example. In this way, stimulate their labor. And, finally, fundamentally change the structure of the management and utilization of refrigerated transport in the Ministry of Railways. Here it is necessary to have one-man management and common interests and incentives for those involved in the management of people. A single technical policy taking into account long-term prospects is needed.

### Rail Problems Plague Grain Transport

18290288b Moscow GUDOK in Russian 5 Sep 89 p 1

[Article by GUDOK correspondent S. Kasatyy under "The Harvest Is Not What Is in the Fields" rubric: "A Pile of Grain"]

[Text] Volgograd-Saratov—Because of the lack of organization and irresponsibility in the management of the main line and departments, more than 110,000 tons of grain have already piled up in the Volga Region.

There have been frequent breakdowns from the first days of the harvest campaign. After the first 20 days in August, having filled the available capacities in storehouses and elevators, the procurers were forced to dump it in open yards, in piles. That is how 110,000 tons of grain are stored.

The station Pallasovka is the largest grain shipment center in the Volgograd Trans-Volga. The harvest in the steppe here was successful. For 2 months, day and night, motor vehicles from Pallasovski and neighboring rayons of Uralsk Oblast in Kazakhstan have been delivering it to the elevator.

We talk with A. Chernyshov, deputy director of the elevator.

Aleksandr Ivanovich does not know what to do. Concerned about the fate of the grain, he is preparing to appeal to the government.

"According to the plan, we are supposed to take 175,000 tons into the bins," he says. "Every day as much as 8,000 tons of grain comes to the elevator. But since we are not able to load and ship all of the grain, a good half of it scuttles without reaching the cars. At the present time, 50,000 tons of it lie in open yards. We were able to cover some of the piles with canvas but more of it just lies there. But what if there is rain or bad weather? Believe me, my soul aches for the grain."

There are more than enough reasons for the concern of A. Chernyshov. His elevator is supposed to take 30,000

tons from the farms of Uralsk Oblst, and 10,000 tons of wheat are awaiting shipment from the neighboring Kayatskaya Station.

The shippers, as Aleksandr Ivanovich related, have equipment, mechanisms and manpower. Grain can be loaded into the cars around the clock. But what is the use? In the first 20 days of the month, only half of the August target (951 cars) had been handled.

The situation is almost the same at the Novouzensk, Dzhanybek and other stations, where tens of thousands of tons of grain piled up because of the lack of provision with cars.

The harvest was successful in the neighboring Uralsk Oblast in Kazakhstan. But when it was just getting under way, G. Khoreshkov, general director of the Uralskhléboprodukt Production Association, was sent to Saratov along with the managers of the Privolzhskaya Line. An agreement was reached with the Volgogradkhleboprodukt and Saratovkhleboprodukt production associations to put part of the Uralsk grain in their elevators and grain acceptance centers for storage and processing. A reciprocal decision was made to accept grain at the elevators adjacent to the Aleksandrov Gay and Novouzensk stations (Saratov Oblast).

Anticipating difficulties, Gennadiy Viktorovich even then warned the railroad authorities that an especially complicated situation was facing Dzhanybek (which is on the border of Uralsk Oblast, in the Astrakhan division of Privolzhskaya). There they had to put no less than 50,000 tons of grain in open areas and for this reason it is very important to send empty cars there solely when the grain is presented for transport and to set up an efficient transport conveyor.

On the whole, they expected the arrival of 200,000 tons of grain in Pallasovka, Novouzensk and Aleksandrov Gay. To provide transport for such a quantity of grain, it was intended to activate three turntables from grain carriers. But the Uralsk division of the Zapadno-Kazakhstanskaya Line, although it did organize them, did not assign them numbers and they went depersonalized to the Privolzhskaya Line. And here, as usual, they seemed not to know or see anything. Since they did not belong to anyone, after the first unloading they were disbanded and did not return to the grain loading stations of the Uralsk division.

The procurers of the Dzhanybek station also blundered. The railroad workers immediately routed cars there but they loaded less. They shipped grain "for dispersal"—to many stations of the Yugo-Vostochnaya, Tselinna and Alta-Ata railroads. Not a single car left for long for Uralsk Oblast, although the high parties had negotiated about this before the start of the harvest work.

D. Saltykov, the authorized representative of the USSR Ministry of Grain Products, was forced to intervene. He demanded that G. Khoreshkov in Uralsk and the Kazakh SSR Ministry of Grain Products establish order.

Unfortunately, order did not come to the transport harvest conveyor immediately but they continued to load "for dispersal."

Who should be blamed here? The Dzhanibek procurers? No, such a shipment plan was given to them by the Kazakh SSR Ministry of Grain Products.

Still, 2 weeks later the intervention of D. Saltykov had its effect. They woke up in Uralsk and reexamined the routing of the grain, urgently presenting another 80,000 tons to Uralsk Oblast through a supplemental plan for August. But they let time get away from them and the grain ended up in piles rather than on wheels.

Why, after all, are they doing such a poor job of getting the grain out through the Privolzhskaya Line? There is a shortage of cars. And the reason is that the railroad workers have lost the habit of washing out and repairing closed cars. In past harvest years, they did not rely on grain carriers but did everything they could precisely to prepare closed cars on a broad front at existing and supplemental points. They worked selflessly, aware of their great responsibility for the fate of the harvest. To be sure, these were years of stagnation. Now, in the time of perestroika, they not only did not restructure themselves but they forgot the good experience of the past. With the shortage of grain carriers, they have essentially done nothing here recently to put the covered cars into circulation.

And P. Voloshenko, chief of the car service of the Privolzhskaya Line, began to sound the alarm about this: long before the maturing of the harvest, he appealed to the head of the railroad V. Chebotarev. Without results, however. So there have been no changes in the preparation of cars. The washed out and repaired 4,202 closed cars. Of these, only 651, or 15.5 percent of the total number, were used for grain. That is not a lot. On an average day, it was possible to take 32 closed cars for grain and sometimes they loaded fewer than that.

But the operative centers for the preparation of cars (PPV) of the Privolzhskaya Line are capable of preparing 1,750 covered cars daily. There are people, outstanding specialists who know how to work exceptionally well,

who sit around without working. And this is under the conditions of cost accounting and self-financing! People become indignant, of course, and complain at all levels, including the correspondent center of GUDOK. In Saratov, at the preparation center in Verkhniy Baskunchak, for example, they did not work a minute on 5 August and 8 August.

The chief of the Volgograd division Krashenko found out about the systematic idle time at the PPV Ilovlya-2 and gave the order to his deputy V. Starev and the head of the transport department A. Sorokin to assemble 100 empty covered cars at the Volgograd junction and to send them there urgently under the timetable of a wrecking train. The order was given in the evening but in the morning not a single closed car had appeared in Ilovlya-2. There were none for 5 consecutive days.

So here you have the concern about the 1989 harvest....

The PPV of the Yershov station can perhaps be considered the "champion" in idle time and idleness. They worked only 3 days out of the first 17 days of August and even then at only half strength.

In addition, complete confusion prevails in the remuneration of the work of car workers employed in the preparation of the empty grain cars. There is no interest in the work of the collective of the PPV at the station imeni Maksim Gorkiy. When the daily standard is fulfilled there, they pay out bonuses of up to 40 percent of the wage rate but for grain it is only 10 percent.

Is it worth the effort? At the PPV in Pugachevsk, they receive 1 ruble for each washed and repaired car and for a grain carrier they get two and a half times that much. Why not do this everywhere?

Every day the requests of grain procurers are not satisfied by hundreds of cars and what kind of help would covered cars be here, when there are always 800 or more beyond the standard in empty cars and local freight. But they are not delivered and are not washed and repaired at the PPV. Thus, the shipment of the grain is disrupted. And for this reason the grain is not hauled out but accumulates at the receiving centers, elevators and in piles.

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